ov. Doc Canada. Hydrographic and Map an "Service

1962



1962

3 1761 11686396

SUPPLEMENT No. 2 TO THE 1958 EDITION

OF THE

GREAT LAKES PILOT

(Volume 1)

LAKE ONTARIO, LAKE ERIE,

and

LAKE ST. CLAIR

(Kingston Harbour to Sarnia)

(Corrected to November 10, 1961)

LIBRARY

AR - 6 1962

Issued by

THE CANADIAN HYDROGRAPHIC SERVICE Surveys and Mapping Branch Department of Mines and Technical Surveys

Ottawa

ROGER DUHAMEL, F.R.S.C. QUEEN'S PRINTER AND CONTROLLER OF STATIONERY OTTAWA, 1962

Cat. No. M51-358/1-2

This Supplement has been compiled from information received in the Hydrographic Service since the publication in 1958 of the fourth edition of the Great Lakes Pilot (Volume 1). All information affecting this pilot, up to and including Notice to Mariners No. 270 of 1961 has been embodied in this Supplement.

Issued free of charge to purchasers of, or on request to those already possessing the parent volume.

Pilots, masters or others interested are earnestly requested to furnish information regarding newly discovered dangers, changes in aids to navigation, the existence of new shoals or channels, errors in publications or other information that, it is considered, would be useful for the correction of Nautical Charts and Hydrographic Publications affecting Canadian waters addressed to the

DOMINION HYDROGRAPHER, CANADIAN HYDROGRAPHIC SERVICE
SURVEYS AND MAPPING BRANCH
DEPARTMENT OF MINES AND TECHNICAL SURVEYS,
OTTAWA, CANADA

SUPPLEMENT No. 2 TO THE 1958 EDITION OF THE GREAT LAKES PILOT (Volume 1).

(Corrected to November 10, 1961).

New matter and alterations follow the order of the paging of the Great Lakes Pilot (Volume 1). The pages referred to in this Supplement are those of the same volume, except where specifically mentioned otherwise in the text.

All bearings are true and are given from seaward, unless otherwise stated; where given in degrees they are reckoned clockwise from 000° (North) to 359° .

Page xix.—After line 39 insert:—"Certain floating aids are equipped with automatic sun switches, designed to turn off their lights in the daytime and on again at night. This applies to certain buoys having quick-flashing lights. Shipping is therefore advised to allow for a reasonable dusk condition before reporting a light out of order. The majority of beacon and range lights are also controlled by sun switches."

Page xx.—Line 21: For "three times annually" read "twice annually with one supplement."

Lines 24-25: Delete "Cornwall, Welland Canal, and Sault Ste. Marie Canal Lock".

Line 30: After "Main Duck Island" insert "Point Petre".

Page xxi.—Lines 40-48: Delete and substitute:—
"Small Craft Warning.—One red pennant displayed by day and a red light over a white light at night to indicate that winds up to 38 miles (33 knots) an hour and/or sea conditions dangerous to small craft operations are forecast for the area.

Gale Warning.—Two red pennants displayed by day and a white light above a red light at night to indicate that winds ranging from 39 to 54 miles (34 to 47 knots) an hour are forecast for the area.

Whole Gale Warning.—A single square red flag with a black square centre displayed during daytime and two red lights at night to indicate that winds ranging from 55 to 73 miles (48 to 63 knots) an hour are forecast for the area.

Hurricane Warning.—Two square red flags with black square centres displayed by day and a white light between two red lights at night to indicate that winds 74 miles (64 knots) an hour and above are forecast for the area."

Page xxii.—After line 16 insert:—

"Bolles Harbour, Mich.-Flagpole.-At mouth of La Plaisance Creek $2\frac{3}{4}$ miles southwest of mouth of River Raisin.

Catawba Island, Ohio. Flagpole. At inner end, northeast side of entrance channel to Catawba Cliff Beach Club harbour.

Chagrin River, Ohio.—Flagstaff.—At Chagrin Lagoons Yacht Club, near waterfront, on west bank at mouth of Chagrin River."

After line 32 insert:—

"Mentor Harbour, Ohio.-Flagstaff.-On bluff on west side of the harbour entrance at Mentor Harbour Yachting Club.

Monroe, Mich.—Vicinity.—See Bolles Harbour, Mich.

Ottawa River, Ohio.—Flagstaff.—At Louie's Boat Service on south bank about three-quarters of a mile downstream from the highway bridge."

After line 34 insert:—

"Port Clinton, Ohio.—Flagstaffs.—At Port Clinton Yacht Club. At Waterworks Park."

Page xxiii.—Line 3: For "STATION". read "STATIONS".

Lines 4-6: Delete and substitute:—

"Detroit, Mich.—Flagstaff, with lights.—At Coast Guard lifeboat station near Belle Isle light, upper end of island. Detroit Boat Club.— Flagstaff.—At northerly side of Belle Isle about 700 feet easterly from Belle Isle Bridge. Detroit Memorial Park Marina.—Flagstaff.—In southwest corner of the marina basin about a half-mile east of the Belle Isle Bridge.

Gibraltar, Mich.—Pole.—Foot of Davis Street."

After line 7 insert:—"Anchor Bay, Mich.—Flagstaff.—At Allen Marina near mouth of Salt Creek, Flagstaff.—At Crash-Rescue dock, Selfridge Field Air Force Base."

Lines 12-13: Delete and substitute.—"St. Clair Shores, Mich.— Flagstaff.—At Jefferson Beach Marina".

Line 14: For "STATIONS" read "STATION".

Lines 15-16: Delete and substitute:—"St. Clair, Mich.—On the Marina Dock about a quarter-mile north of the mouth of the Pine River."

Page xxvi.—Lines 20-32: Delete "The completion" to "Quebec to Kingston" and substitute:—"With the opening to navigation of the St. Lawrence Seaway in 1959, ocean-going and inland-water vessels not exceeding 715 feet (218m0) in overall length and 72 feet (21m9) beam, are permitted unrestricted transit throughout the Seaway system to Lake Erie, subject to the maximum draught restrictions which are published from time to time in Seaway Notices to Mariners".

Page 1.—Lines 25-29: Delete "Soundings" to end of paragraph and substitute:—"There is a least depth of 15 feet (4m6) in the approach to and around the breakwater over a width of 200 feet (61m0) at the upper end widening to 250 feet (76m2) at the lower

end on the mainland side, and depths of 24 to 26 feet (7^m3 to 7^m9) along the river side. A ferry runs daily from Kingston to Cape Vincent".

Page 2.—Line 26: For "walings" read "wallings".

Line 40: For "Main Channel" read "the Seaway Channel".

Line 48: Delete.

Page 3.—Line 6: For "1956, a population of 45,625" read "1958, a population of about 48,000".

Lines 6-9: Delete "Its distance" to "miles" and substitute:—"The distance by the St. Lawrence Seaway from Victoria Bridge, Montreal, to Kingston, is about 208 (180 nautical) miles.

Line 11: Delete "Bay of" to "and".

Lines 23-24: For "to the Canadian Pacific Railway wharf" read "into Anglin Bay".

After line 25 add:—"Vessels wishing to pass through the bridge should signal with three long blasts followed by one short blast. The bridge will not be raised for pleasure craft on week-days between the following hours: 0730 to 0830; 1200 to 1300; and 1630 to 1730. Yachts arriving at such times will find a sheltered anchorage at the west end of the causeway, northward of the C.S.L. wharf".

Line 30: Delete "there is" to end of sentence and substitute:—
"from southerly winds, there is good wharfage about 1,000 feet (304^m8) in length."

Line 33: Delete "been dredged to 18 feet (5^m5)" and substitute:—
"has a least depth of 13 feet (4^m0)".

Line 34: For " $14\frac{1}{2}$ feet (4^m5) " read "8 feet (2^m4) ". For "Sowords" read "Sowards".

Line 36: Delete and substitute:—"and the channel to the Canadian Dredge and Dock Company dry dock, to 11 feet (3^m3)".

Line 37: For "A red spar buoy marks" read "Two red spar buoys mark".

Lines 44-48: Delete and substitute:—"Marine radio station.— A marine radio station, in operation throughout the navigation season, is situated on the heights above Fort Henry (Lat. 44° 14′ N., Long. 76° 28′ W.) For details of services provided, mariners should consult the Radio Aids to Marine Navigation—see page xx".

Line 49: Delete and substitute:—"Ferry.—There is frequent ferry service throughout the navigation season from the Crawford wharf at Kingston to Wolfe Island and a less frequent service to Garden and Simcoe Islands".

After line 49 insert:—"Speed limit.—There is a speed limit of 8 miles per hour within the harbour limits".

Page 4.—Lines 2-9: Delete and substitute:—"Dry Docks and Marine Railways.—The Government dry dock (operated by Kingston Shipyards), is situated 600 yards (548^m6) southward of City Hall. Its length is 353½ feet (107^m8), which may be increased by 23½ feet (7^m2), if the caisson is placed in the outer stop. The breadth in the entrance is 55 feet (16^m8), and the depth over the sill 13¾ feet (4^m2) at extreme low water level of 1895. Kingston Shipyards also maintain a marine railway, which can handle craft 150 feet (45^m7) long, weighing up to 250 tons and drawing 7 feet (2^m1). The yard is equipped to carry out repairs of all kinds, and to build ships up to the length of the dry dock. Cranes and sheer legs can lift up to 100 tons.

The Canadian Dredge and Dock Company, whose yard is situated on the west side of the inner harbour, operates a dry dock 210 feet (64^m0) long, 48 feet (14^m6) wide, with a depth over the sill of 11 feet (3^m4). This yard can carry out all kinds of repairs and can build ships

up to the length of the dry dock.

The Kingscraft Marine Construction Company has a marina in Portsmouth Bay, which lies immediately adjacent to, and westward of the penitentiary. There are two marine railways at the marina, the larger of which can handle a vessel of 15 tons, with a draught of 5 feet (1^m5). The yard can build and repair wooden craft and repair engines.

The marine railway at the Kingston Yacht Club can accommodate

yachts weighing up to 10 tons, with a draught of 6 feet (1^m8).

At Knapp's marina, close northward of the west end of La Salle Causeway, a craft weighing up to 4 tons can be lifted from the water, and larger yachts can be serviced."

Line 16: Delete "48 feet (14^m6)" to "daymark" and substitute:— "51 feet (15^m5), from a red tripod, surmounted by an oval, fluorescent orange, daymark".

After line 19 add:—"A light is exhibited, at an elevation of 20 feet (6^m1), from the northeast corner of the Crawford wharf."

Lines 26-51: Delete and substitute:—"(4^m9) alongside. This wharf cannot be used without permission of the penitentiary authorities. Two wharves situated on the south side of the penitentiary, were in poor condition (1961). Between the penitentiary and the Public Utilities wharf, about half a mile eastward, are the submerged ruins of three small wharves. The Public Utilities wharf has a depth of 5 feet (1^m5) within the sheltered basin. The main water intake pipe for the city of Kingston, extends southward from the west end of the wharf and is marked at the outer end by a red light-buoy, showing a flashing red light.

Half a mile eastward of the above wharf is the Queen's University power-house wharf. It affords no shelter and is used mainly to offload and store coal. A quarter of a mile eastward is the Kingston

Yacht Club wharf, with a slip inside it.

From the yacht club, the shore trends north-northeastward for

about a mile to the La Salle Causeway.

Adjoining the yacht club wharf is a wharf used for coal storage, which affords no shelter and was in poor repair in 1961. Close northeastward are the Kingston Shipyards.

Adjoining the shipyards to the north, is the wharf of the Pyke Salvage and Navigation Co., with a least depth of 9 feet (2^m7) along-

side the outer end.

The Canadian Locomotive Company wharf, northward of the last-mentioned, has a least depth of 11 feet (3^m4) alongside. Within the basin contained between the above wharf and Swift's wharf close northward, are depths ranging from 6 to 10 feet (1^m8 to 3^m0). Swift's wharf has 8 feet (2^m4) at the outer end and 12 feet (3^m7) in the berths on the south side. Next is the Crawford, or Government wharf, about 350 feet (106^m7) long and 70 feet (21^m3) wide. There are depths of 9 to 12 feet (2^m7 to 3^m7) alongside the wharf on the north side. The outer end of the wharf is used by the Wolfe Island ferry and should be avoided by other craft. At the inner end of the wharf are offices of Customs, Immigration, and the Harbour Master. There is good shelter on the north side of this wharf. Richardson wharf, the next northward, has depths of 11 feet (3^m4) in the outer berths on either side.

The Crawford Coal wharf has a depth of 11 feet (3^m4) alongside the berth 200 feet (61^m0) in length at the south end of the wharf and 9 feet (2^m7) at the northern end. The wharf of Cataraqui Associates, with 15 to 17 feet (4^m6 to 5^m2) alongside the berths on the north side, is situated close north of the coal wharf. Next northward is the wharf of the White Rose Marina, with from 14 to 17 feet (4^m3 to 5^m2) alongside. Between this wharf and the La Salle Causeway is the frontage of Fort Frontenac in which are the Canadian Defence and War Staff Colleges. There are no wharves in this area, but there is sheltered anchorage for small craft.

On the east side of the Catarqui River and north of the east end of La Salle Causeway, is "H.M.C.S. Cataraqui", a shore establishment of the Royal Canadian Navy. The wharf before the establishment, 454 feet (138^m4) long, has a depth of 7 feet (2^m1) alongside.

Navy Bay lies to the east of Point Frederick. It is without shelter, except at the wharf of the Royal Military College, permission to use which must be obtained from the college authorities".

Page 5.—Line 3: For "8 feet (2^m4)" read "7 feet (2^m1)".

Line 4: For "11 feet (3m4)" read "10 feet (3m0)".

Line 15: For "the city's" read "an".

Lines 43-44: Delete "700 feet" to end of sentence and substitute:—"642 feet (195^m7) long, 150 to 200 feet (45^m7 to 61^m0) wide, and dredged to 25 feet (7^m6)".

Line 45: Delete "250 feet" to end of sentence and substitute:— "150 feet (45^m7) wide and dredged to 19 feet (5^m8)".

After line 49 add:—"The Richardson wharf, 800 feet (243^m8) long, is situated one cable eastward of the elevator wharf. In 1961, a channel 450 feet (137^m2) wide and 19 feet (5^m8) deep, was being dredged from the main channel to the berths on the west side of the wharf. The southeast limit of the channel is marked by two red spar buoys."

After line 52 add:—"Inside the breakwater and to the west of the elevator, there is good shelter for boats with a draught of less than 9 feet (2^m7). Landing facilities are not good, and occasional rock patches make holding ground uncertain. A marina is situated on the northwest shore of the bay".

Page 6.—Line 42: For "small wharf" read "ruined wharf".

Line 46: Add:—"There is a Government wharf at the village, with a depth of 6 feet (1^m8) at the outer end".

Lines 47-48: For "The other end of the wharf" read "The outer end of the ruined wharf".

Page 7.—Line 3: For "Parrot Point" read "Parrott Point". For "Parrot Bay" read "Parrott Bay".

Line 6: Add "There is a private wharf on Parrott Point".

Line 10: After "long" add "with a depth of 36 feet (11^m0) at the outer end".

After line 14 insert:—"The silver-coloured water tower and red brick plant are conspicuous from seaward".

Lines 20-21: Delete "There are three" to end of sentence and substitute:—"A wharf is situated at the west entrance to the creek that empties into North Channel at the village of Bath. A warehouse, in poor condition 1961, is situated on the wharf, access to which is made over the bar at the mouth of the creek, with a reported depth of 6 feet (1^m8)."

Line 23: For "half a mile northeast of which is Downey wharf" read "with its conspicuous church spire".

Line 24: For "the latter" read "Sandhurst".

Lines 33-34: Delete "for the use of the fishing boats".

Page 8.—Lines 19-20: Delete "At its pier" to end of sentence.

Line 24: Delete "Emerald and Bath and also between".

Page 9.—Line 13: For "Bateau Channel" read "Boat Channel".

Page 11.—Line 1: Delete and substitute:—"Chart 2064".

Line 2: For "11 feet (3^m4)" read "9 feet (2^m7)".

After line 4 add:—"Light-buoy.—A red light-buoy, showing a flashing red light and fitted with a radar reflector, is moored off the southwestern end of South Charity Shoal".

Line 10: Delete "No. 4".

After line 11 add:—"Light-buoy.—A black and white light-buoy, showing a short-long white flashing light and fitted with a radar reflector, is moored about $1\frac{1}{2}$ miles southeastward of East Charity Shoal light".

Line 16: For "10 feet (3m0)" read "9 feet (2m7)".

Line 20: Delete "No. 2".

Page 14.—Line 42: For "Little Galloo Isand" read "Little Galloo Island".

Page 15.—Line 29: For "7 feet (2m1)" read "6 feet (1m8)".

After line 43 add:—"Light-buoy.—A black light-buoy, showing a flashing green light and fitted with a radar reflector, marks the southwest limit of shoal water extending from Main Duck Island".

Page 17.—Lines 3-5: Delete "In 1954" to end of paragraph and substitute:—"In 1959, a channel 60 feet (18^m3) wide and 5 feet (1^m5) deep, was dredged from the lake to the Government wharf, 118 feet (36^m0) in length, situated in the northeast corner of the harbour".

Lines 6-7: Delete "36 feet" to "attached" and substitute:—"46 feet (14^m0), from a skeleton steel tower situated".

Page 19.—Line 15: For "Flat Point" read "Flatt Point".

Line 18: For "Flat Point" read "Flatt Point".

After line 35 add:—"Submarine cable.—A submarine telephone cable leads from close westward of the above wharves in a south-southeasterly direction to Waupoos Island".

Page 21.—Lines 1-27: Delete and substitute:—

"THE RIDEAU WATERWAY

Charts 1575, 1576.

The Rideau Canal, built by the Royal Engineers in the years 1826-32, ascends through a narrow, natural valley flanking the Parliament Buildings at Ottawa, by a series of eight locks in flight. The canal follows an irregular course through the city and suburbs for a distance of about 5 miles ascending by means of locks to enter the Rideau River at Hogs Back.

The channel follows the river upward to its source in the Rideau Lakes, various dams and locks overcoming the difference in level

encountered along the route.

Kemptville Creek enters the Rideau River about 30 miles above Ottawa. It is navigable without locks for about three miles to the town of Kemptville by shallow-draught vessels which do not require a vertical clearance greater than eight feet.

Two miles above Smiths Falls at Poonamalie Lock, vessels leave the Rideau River and enter Lower Rideau Lake, the first of a long

chain known under the collective title of Rideau Lakes.

The **Tay Canal**, built between 1831-34 by a private company and later enlarged by the Dominion Government to provide a 5-foot draught, branches northwestward from Lower Rideau Lake to its juncture with the **Tay River** and thence to the town of Perth, distant $6\frac{3}{4}$ miles from Lower Rideau Lake.

Rideau Lake is entered at Rideau Ferry and is separated from Upper Rideau Lake southwestward by Narrows Lock. This latter lake forms the summit of the Rideau Waterway, about 277 feet above the Ottawa River.

A narrow canal, about one mile in length, connects Upper Rideau Lake with Newboro Lake, whence the waterway descends successively through Clear Lake, Indian Lake, Opinicon Lake, Sand Lake, Whitefish Lake, Little Cranberry Lake and Cranberry Lake.

The outlet from Cranberry Lake is through the Cataraqui River, dammed at Brewers Mills, Lower Brewers and Kingston Mills, respectively. Through two successive expanses of drowned land above these dams, the channel leads to Kingston Mills where, by a single lock and three locks in flight, it descends to the natural channel of the Cataraqui which is then followed for about 6 miles to Kingston Harbour.

Navigational Aids.—The Rideau Waterway is adequately marked by spar buoys and beacons. Ascending upstream from the Ottawa River to Newboro Lock at the southwest end of Rideau Lake, starboard hand spar buoys are pointed, fitted with a wooden crosspiece and painted red. Port hand spar buoys are T-shaped and black in colour. From Newboro Lock to La Salle Causeway the buoyage system is reversed as vessels are considered to be travelling downstream from the summit level at Newboro Lock towards Kingston.

Square wooden beacons, about 5 feet high, painted white with red or black tops, indicate the channel in addition to the above spar buoys.

Bridges are marked with a red and a black diamond on white backgrounds to indicate the limit of the channel under the bridge.

In addition to the above aids, directional signs are placed at intervals to indicate the main Rideau Route.

Locks, Approach Wharves and Bridges.—All locks and bridges are manually operated, with the exception of lift bridges at Ottawa and Smiths Falls and highway swing bridges at Smiths Falls, Kingston Mills, Merrickville and Chaffeys Lock.

Small wharves or pontoons are situated immediately above and below the locks. Boats should secure to the wharf on arrival, until the Officer-in-Charge is prepared to receive the vessel into the lock.

Vessels approaching locks and bridges should sound three long blasts of 10 seconds' duration, to indicate that they wish to enter the lock or pass through the bridge.

Vessels approaching the La Salle Causeway should signal the lift bridge by sounding three long blasts followed by one short blast. Mooring lines are not required within the locks; when in position within the lock, engines should be stopped and the chains placed at intervals along the lock walls used to steady the vessel alongside.

Speed.—Vessels within the canal sections of the waterway should proceed at a reasonable speed so as not to cause undue delay to vessels navigating in the same direction, but the vessel shall not, in any event, exceed a speed of six miles per hour. The "Canada Shipping Act" states that:—Every person who navigates or operates any vessel, or any water skiis, surfboard, watersled or other towed object on the inland, minor or other waters of Canada in a manner that is dangerous to navigation, life or limb, having regard to all the circumstances including the nature and conditions of such waters and the use that, at the time is, or might reasonably be expected to be made of such waters, is guilty of an offence.

Vessels intending to traverse the full distance of the waterway should allow three full days for the passage, when their maximum

speed is less than ten miles per hour.

Facilities.—The principal marinas along the Rideau Waterway are situated as follows:—The Ottawa Rowing Club, about one-quarter mile below Alexandria Bridge on the Ottawa River; at Dows Lake, adjacent to H.M.C.S. CARLETON; at Mooneys Bay above Hogs Back locks; the Manotick Marina, three-quarters of a mile above Collins Point; at Merrickville, close below the dam on the north bank; at Smiths Falls; at Rideau Ferry; Len's Cove Marina, Portland; close above Chaffeys Locks on the east bank of the canal adjacent to the railway bridge; at Jones Falls; at Seeleys Bay; the Rideau Marina about 1½ miles above the La Salle Causeway at Barker Point; Knapps Marina at the west end of La Salle Causeway and the White Rose Marina at the former C.S.L. wharf, Kingston.

General.—The Rideau River, about 63 miles in length from its source in the Rideau Lakes to its juncture with the Ottawa River at Rideau Falls, varies in depth from 6 to 30 feet in the main channel. Above Mooneys Bay the river leads between wooded, clay banks, about 60 feet high, to the lock at Black Rapids. Thereafter, the banks are generally low and lightly wooded, fringed by summer cottages and farmland. There are extensive growths of rushes along the shore and, in places, patches of weed extend to the edge of the channel where the water is shoal.

Lower Rideau Lake is shallow and contains several low-lying, wooded islands in the northeast portion of the lake. The islands are fringed by rushes and weed. Southward of **Box Island** and close outside the cruiser channel, are many deadheads. **Sawlog Channel**, 80 feet wide and fringed by trees, suitable for boats of shallow draught, leads southwestward from the main channel abreast the northern point of Box Island, rejoining the main channel northward of **Sand Island**.

Rideau Lake, about 13 miles in length, is contained between Rideau Ferry on the northeast and Narrows Bay on the southwest.

The shores of the lake and the islands therein are rocky and thickly wooded, rising to an elevation of about 60 feet. With the exception of Narrows Bay, where the channel is shallow and fringed by weed on either side, there is ample water in the vicinity of the charted track. In 1961, a sounding of 341 feet was obtained in a position about one-half mile northwestward of **Tar Island.**

From Upper Rideau Lake the waterway descends to the Cataraqui River, through a succession of lakes, the shores of which are, in

general, rocky, of moderate elevation and thickly wooded.

A narrow, winding canal, about one mile in length, joins Upper Rideau Lake to Newboro Lake. In places the cut is barely 50 feet wide and mariners should proceed at slow speed, exercising caution at turns in the channel.

The Elbow, a deep natural channel about 40 feet wide, joins Newboro Lake to Clear Lake. The entrance is concealed until southward of Goat Island, where course must be altered more than 90° to port, to enter the channel. Shoal water containing deadheads lies westward from Goat Island and must be avoided.

On leaving **Chaffeys Locks**, mariners should keep within the channel limits as the water is shallow with extensive weed patches. Westward of **Berlin Islands** the channel alters sharply eastward and

thence southward.

Eel Bay is joined to Jones Falls by The Quarters, a narrow,

winding channel in which speed should be reduced.

There are numerous deadheads above and below water in Cranberry Lake and the River Styx where the water-level has been raised by the dams at Brewers Mills and Kingston Mills, respectively. Vessels without local knowledge should remain inside the channel limits within these lakes.

From Brewers Mills to its entry into the River Styx, 1½ miles below **Lower Brewers** lock, the Cataraqui River is about 100 feet wide, fringed by rushes on either side and overhung by trees that

grow to the water's edge.

Below the locks at Kingston Mills, the river winds between rocky banks about 80 feet high, for about three-quarters of a mile to Highway 401 roadbridge. Extreme caution should be exercised when passing under this bridge, as the channel, although well-buoyed by starboard hand buoys, is only about 20 feet wide with a rocky bottom.

From the above bridge the channel is shallow, but well marked

by spar and light-buoys to the La Salle Causeway at Kingston."

Line 34: For "supplied by the Tay" read "supplied by Bobs Lake through the Tay".

Page 22.—Line 21: For "161 (49m1)" read "162 (49m4)".

Line 23: For "438 (133m5)" read "439 (133m8)".

Line 24: For "26 (7m9)" read "25 (7m6)".

Line 37; For "27' 0" (8m2)" read "22' 0" (6m7)".

Line 39: For "30' 0" (9m1)" read "24' 0" (7m3)".

Page 23.—Insert in correct sequence:—"0.40 Mackenzie King

Bridge-concrete fixed span—overhead clearance 26 0".

For "1.56 Bridge 1—Vertical lift—Pretoria Avenue 29 6" read "1.56 Pretoria Ave. Bridge—vertical electric swing span—overhead clearance—22 0".

For "3.40 Bridge 2-swing—Bronson Avenue" read "3.42 Bronson

Ave. Bridge—concrete fixed span—overhead clearance—27 0".

For "16.03 Bridge 6-swing—Manotick" read "16.03 Manotick Bridge—high level fixed highway bridge—overhead clearance—22 0".

Page 24.—Insert in correct sequence:—"119.56 Highway 401 Bridge—high level fixed highway span—overhead clearance 24 0".

Page 31.—Lines 8-9: Delete "Between Prescott" to end of sentence.

Page 32.—Line 16: For "10 feet (3^m0) " read " $8\frac{1}{2}$ feet (2^m5) ". Line 38: After "extent" insert:—"and wooded".

Page 33.—Line 8: After "shore" insert:—"with its conspicuous church spire".

Line 18: For "a wharf" read "a ruined wharf".

Line 19: Delete "The channel" to end of line.

Line 27: Delete.

Line 29: For "on Allison Wharf" read "situated about one mile southwestward of Cole Point".

Page 34.—After line 21 insert:—"The water tower, chimney and plant of the Lake Ontario Portland Cement Company, situated one mile northeastward of the Marmoraton Mining Co. wharf on the west shore, is very conspicuous. Loading berths, formed by 12 rock-filled sponsons lying parallel to the shoreline, have depths ranging from 20 to 30 feet (6^m1 to 9^m1) alongside".

Line 33: For "Culliver" read "Colliver". For "373 feet (113^m7)" read "about 500 feet (152^m4)".

Line 39: For "lower" read "north". Add "Rickartons wharf, situated on the east shore at the entrance to the harbour, was in ruins (1961)".

After line 39 insert:--"Charts 2006, 2064".

Lines 41-42: Delete "As the cove" to end of sentence.

Line 43: Delete.

Page 35.—Lines 5-6: Delete "On it" to end of sentence.

After line 12 add:—"A shoal, with 3 feet (0^m9) of water, lies in the middle of the entrance to Little Cove."

Lines 38-40: Delete "Buoy.—" to "point" and substitute:— "Light-buoy.—A red light-buoy, showing a flashing red light, is moored about 3 cables southward of Casey Point". Line 42: For "Bogart wharf" read "the ruined Bogart wharf".

Line 46: Delete "on the line from Bogart to Huff wharf and".

Page 36.—Lines 2-7: Delete.

Lines 9-10: Delete "three-quarters of a mile northward of Cole wharf".

Lines 15-16: Delete "and Bogart wharf" to end of sentence.

Lines 35-36: Delete "There are several" to end of sentence.

Lines 44-47: Delete and substitute:—"Buoyage.—A black light-buoy, showing a flashing white light, is moored on the edge of the 3-fathom (5^m5) line northward of Foresters Island. A black light-buoy, showing a flashing white light, moored 2 cables eastward of the above buoy, serves as a turning buoy for vessels entering the Bay of Quinte from Long Reach.

The ruins of a submerged wharf, extend about 70 feet (21^m3)

northward, from the north extremity of Foresters Island".

Page 37.—Lines 11-13: Delete and substitute:—"Wharf.—The wharf of the Dravo Construction Company, about 230 feet (70^m1) long and 96 feet (29^m3) wide, is situated at the foot of Mill Street. There is a depth of about 9 feet (2^m7) at the outer face and in the slips on either side of the wharf. A railway spur line leads onto the

wharf which was overgrown by weeds in 1961.

The wharf of the Dawson marina, 135 feet (41^m1) long, with a depth of 10 feet (3^m0) alongside, is situated about 400 yards (365^m8) northeastward of the Dravo wharf, Gasoline, diesel oil and power are available and a marine railway having a capacity of 25 tons, or 50 feet (15^m2), is situated close westward of the wharf. In 1961, an L-shaped breakwater was under construction to shelter the marina from southwesterly winds and provide additional mooring berths. Two spar buoys mark submerged cribs close off the marina wharf, the channel to which leads between the buoys, leaving the red spar to port and the black to starboard".

Lines 18-19: Delete "It is reported" to end of sentence and substitute:—"The channel was dredged to 6 feet (1^m8), but silting is reported to have taken place (1961)".

After line 23 insert:—"A marina is situated on the north shore of the river about $1\frac{1}{2}$ miles above Unger Island. There is a reported depth of 3 feet (0^m9) alongside at high stages of the lake. The channel to the marina is marked by two spar buoys".

Line 34: For "spar buoy" read "light-buoy".

Line 37: For "Government" read "Dravo".

Page 38.—Line 1: Delete and substitute:—"Charts 2006, 2064, 2069".

After line 1 insert:—"A small wharf, with 5 to 6 feet (1^m5 to 1^m8) alongside, extends eastward from that point on the north shore abreast Foresters Island".

Line 6: Add:—"The stone tower of the church is conspicuous".

Line 9: Add:—"A proposed high-level highway bridge is planned to span the narrows at this point".

Line 12: For "of" read "off".

Line 13: Add:—"The island is joined to the mainland at low water datum and is isolated only at high stages of the lake".

Lines 14-15: For "46 feet (14^m0) , from a white, square tower" read "36 feet (11^m0) , from a lattice steel tower, with a white oval-shaped daymark".

Line 16: After "channel" insert:—"about 150 feet (45m7) wide".

Lines 19-22: Delete and substitute:—"Buoyage.—The channel, about 1¼ miles in length, is marked at the east end by a red and a black light-buoy, showing a flashing red and a flashing white light, respectively. The western end of the channel is marked by two red light-buoys showing flashing red lights and a black light-buoy showing a flashing green light. The remainder of the channel is well marked by spar buoys."

Line 23: For "25 feet (7^m6)" read "28 feet (8^m5)".

Line 43: Add:— "and a black light-buoy, showing a *flashing* white light, is moored $5\frac{1}{2}$ cables northeastward of the shoal".

Page 39.—Lines 3-5: Delete "The berth" to end of sentence and substitute:—"About one mile eastward of Northport, is situated the plant and silver-coloured silo of the Edgewater Canners, conspicuous from seaward".

Lines 25-26: Delete.

Lines 40-45: Delete and substitute:—"The village of Point Anne is situated at the northwest entrance point to Big Bay. About one mile northeastward of the village are the plant and wharves of the

Canada Cement Company.

The coal wharf at the plant is 215 feet (65^m5) long. At the east end of the coal wharf is a slip, 90 feet (27^m4) wide and 200 feet (61^m0) long. On the west side of the slip is a conveyor belt for loading cement. The eastern side of the slip is used for discharging gypsum. The least depth at the wharves was reported to be 14 feet (4^m3) in 1959.

Buoyage.—A red spar buoy is moored $1\frac{1}{2}$ cables eastward of the Canada Cement wharf, and a red light-buoy, showing a *flashing red* light, 3 cables southward of the wharf".

Page 40.—Lines 2-4: Delete and substitute:—"Ox Point, a low, wooded peninsula, is situated at the northwest end of the above narrows. The ruins of an abandoned cement plant lie close eastward of the point."

Line 6: For "the above point" read Point Anne".

Line 14: After "Ship Islet" insert:—"about 5 feet (1^m5) high and bare".

Line 19: For "old hotel buildings" read "concrete piles".

Line 26: After "Cow Island" insert:—"wooded".

Page 41.—Lines 5-6: Delete "The entrance" to "1955".

Line 7: After "Schuster dock" insert:—"in poor condition 1961".

After line 12 add:—"The large warehouse on the outer end of the Government wharf is used for cheese storage. Tankers are discharged, via pipeline, from the west side of the Government wharf, or from the Harbour Commission wharf. Coal is also discharged at the latter wharf.

The plant of the Bakelite Company is situated about 2 miles eastward of Belleville. Chemicals are off-loaded from barges at the outer end of a rock breakwater. The chimney and water-tower, together with the red brick building of the plant are conspicuous".

Page 42.—Lines 34-35: Delete "lies two-thirds" to "south side" and substitute:—"lies".

Line 39: For "10 feet (3m0)" read "about 6 feet (1m8)".

Line 42: Add:—"In 1961, the wharf was in poor condition and the gas pump abandoned. A ruined canning factory and water tower are situated behind the wharf".

Page 43.—Lines 2-3: For "from a pole on a pier" read "from a white circular tower."

Lines 23-24: Delete "It has two" to end of sentence.

Line 32: For "Myers Point" read "Meyers Point".

Line 33: Add:—"and a small unnamed island".

After line 33 insert:—"Trenton R.C.A.F. Station, where the Rescue Co-ordination Centre for marine search and rescue services Great Lakes Area is situated, lies close northward of Meyers Point. An L-shaped wharf for the use of R.C.A.F. launches, about 100 feet (30^m5) long at the face, is situated on Meyers Point. A buoyed channel, dredged to 8 feet (2^m4), leads from the main channel eastward of Baker Island to the wharf. A concrete apron for the use of floatplanes, is situated close northeastward of the wharf and the area is sheltered from southwesterly winds by a causeway, (under construction 1961), extending southeastward from Meyers Point to Baker Island".

Page 44.—Line 28: For "4 miles per hour" read "6 miles per hour".

Line 34: For "Lovatt bridge" read "Lovett bridge".

Line 45: For "fixed white" read "fixed green".

Page 45.—Lines 25-27: Delete.

Line 30: For "eastern crooked cut" read "channel leading to Trenton".

Line 31: For "10 feet (3m0)" read "11 feet (3m4)"

Line 33: For "Myer Point" read "Meyers Point".

Line 42: For "281°" read "279°".

Page 46.—Line 4: For "281°" read "279°".

Line 5: For "520 feet (158m5)" read "500 feet (152m4)".

Line 6: For "281°" read "279°".

Page 48.—Line 41: For "50 feet long (18^m3)" read "56 feet (17^m1) long".

Page 52.—Lines 17-21: Delete.

After line 33 add:—"There is a radiobeacon at the lighthouse".

Lines 35-41: Delete and substitute:—"Danger area.—There is a practice firing area in the vicinity of Point Petre, for the details, mariners should consult the Annual Edition of Notices to Mariners of the current year".

Page 53.—Line 14: Add "In 1958, the channel leading to the breakwater was dredged to 3 feet (0^m9)".

Line 25: For "Yoe Lake" read "West Lake".

Lines 34 and 38: For "Yoe Lake" read "West Lake".

After line 38 insert:—"In 1961, the breakwater piers protecting the above opening were reported in a poor state of repair".

Page 54.—Line 14: For "has been dredged to the same depth" read "was dredged to the same depth but has since silted in and in 1961, there was about one foot (0^m3) above chart datum in the channel entrance".

Lines 26-27: Delete "51 feet" to "attached" and substitute:— "70 feet (21^m3), from a skeleton steel tower".

Page 56.—Lines 2-4: Delete.

After line 17 insert:—"Gasoline and water may be obtained at the wharf, behind which is situated the Presqu'île Hotel".

Lines 39-41: Delete and substitute:—"The ruins of several wharves, above and below water, extend from shore at Gosport".

Lines 43-47: Delete.

Page 59.—Lines 19-26: Delete.

Page 60.—After line 31 insert:—"Wharf.—At Ogden Point are situated the quarry and wharf of the St. Lawrence Cement Company. The T-shaped wharf, about 1,360 feet (414^m5) long, has depths of 28 to 30 feet (8^m5 to 9^m1) alongside and has no shelter from southerly winds. Limestone is loaded from the wharf and shipped to the plant of the same company at Clarkson. A 23-foot (7^m0) patch, lies about one-quarter of a mile westward of the wharf.

Light.—A light is exhibited, at an elevation of 62 feet (18^m9), from the outer end of the wharf.

Lines 34-35: Delete "Colborne wharf" to end of sentence.

Line 37: Add:—"and only a few piles remained in 1961".

Line 42: For "Mulcaster Point" read "McGlennon Point".

Line 45: For "Mulcaster Point" read "McGlennon Point".

Lines 46-48: Delete "a short" to end of sentence and substitute:—
"is situated a barn and silo. The windmill shown on chart 2061 is not visible from seaward".

Page 61.—After line 14 insert:—"Danger area.—A rifle range is situated on shore close west of Lucas Point, the seaward limits of the firing area are marked by red spar buoys, extending seaward in a southerly direction from the vicinity of Lucas Point".

Lines 35-36: Delete and substitute:—"A checkwater arm, 220 feet (67^m1) long, extends westward from the east pier in the direction of the".

Lines 39-40: Delete "has a" to end of sentence and substitute:— "has depths of 14 to 16 feet (4^m3 to 4^m9) alongside".

Line 41: For "15 feet (4m6)" read "16 feet (4m9)".

Line 43: For "13 feet (4m0)" read "14 feet (4m3)".

Lines 45-47: Delete "The harbour" to "northern side" and substitute:—"Oil is discharged from vessels at the central pier through a pipeline leading to numerous storage tanks situated at the foot of the pier. A ruined ferry slip is situated at the inshore end of the pier on the northern side.

Large coal stocks owned by the Pittsburgh Rochester Coal Co. and the Weaver Coal Co. are stored on the Esplanade wharf".

Page 62.—Line 11: For "white" read "orange".

Line 22: Delete and substitute:—"skeleton tower with a diamond-shaped daymark, on a circular caisson about 10 feet (3^m0) high, situated on Peter Rock".

Lines 37-38: Delete "and the Mathews Conveyor Co., Ltd" and substitute:—"and the Eldorado Mining and Refining Limited for the extraction of uranium from the ores".

Line 39: Delete.

Lines 43-44: Delete "of the waterworks" to end of sentence and substitute:—"of the Eldorado Refinery situated 200 feet (61^m0) westward of the inner harbour".

Page 63.—Line 12: Delete and substitute:—"a breakwater arm 450 feet (137^m2) long, extends southwestward from the foot of the west breakwater".

Line 13: For "1956" read "1961".

Line 14: For "14 feet (4m3)" read "16 feet (4m9)".

Line 15: Delete and substitute:—"dredged to 15 feet (4^m6) and a depth of 12 feet (3^m7) can now be carried".

Lines 16-17: For "700 feet (213m4)" read "800 feet (243m8)".

Line 19: For "12 feet (3^m7) read "15 feet (4^m6)".

After line 21 insert:—"A marina and small boat slip are situated on the east side of the eastern harbour at the north limit of the dredged area. The eastern arm is illuminated at night. Stocks of coal are maintained on the west side of the outer harbour".

Page 64.—Line 25: Delete "are no longer in a state of repair" and substitute:—"at the entrance are ruined".

After line 27 add:—"A sandbar is reported to lie in the entrance to the harbour".

Line 37: Delete "The depth" to end of sentence and substitute:—
"In 1961, the channel was available to small boats only, at high stages of the lake".

Page 65.—Line 8: After "lake" insert:—"in two distinct steps".

After line 16 insert:—"A break through the beach, available to small boats, lies about 1½ miles east of Oshawa harbour".

Lines 21-28: Delete.

Lines 30-33: Delete "The east" to end of paragraph and substitute:—"The east breakwater is 1,150 feet (350^m5) long and at the inshore end is a marina and boat hoist. The west breakwater is about 1,000 feet (304^m8) in length. Oshawa Yacht Clubhouse is situated on the wharf, midway along the west breakwater".

Lines 38-39: For "buildings along the harbour" read "oil storage tanks"

Lines 41-42: Delete "An electric" to end of sentence.

Line 43: After "Leading lights.—" insert:—"Fog signal.—".

Lines 44-45: Delete "40 feet" to "steel" and substitute:—"35 feet (10 m 7), from a white circular"

After line 47 insert:—"A fog signal is sounded from the front light tower".

Line 48: Delete and substitute:—"Buoyage.—Two red spar buoys mark the northwestern limit of the turning".

Page 66.—Lines 6-7: Delete and substitute:—"The approach channel to the breakwater entrance has been dredged to 23 feet (7^m0) and the buoyed channel leading to the basin 21 feet (6^m4), in 1961. However the depths are subject to silting and due caution must be exercised".

After line 19 insert:—"A group of radio masts, painted with red and white bands, are situated on Gold Point".

Line 34: For "650 feet (198^m1)" read "900 feet (274^m3)". $53566-6-3\frac{1}{2}$

Lines 36-39: Delete and substitute:—"From the outer pair of spar buoys to abreast the east breakwater, the fairway had a least depth of 22 feet (6^m7), in 1960. Within the breakwaters and alongside the wharves, 1,100 feet (335^m3) in length, the harbour has been dredged to 20 feet (6^m1). The channel leading along the northeast shore to the dry dock and ship repair plant of McNamara Marine Ltd. was dredged to 18 feet (5^m5) in 1961. Frequent dredging is required within the harbour to overcome silting.

Dry dock.—Ship repairs.—In the northeast part of the dredged area are situated the dry dock and ship repair plant of McNamara Marine Ltd. The ship repair wharf is 300 feet (91^m4) long. Adjoining the wharf northwestward is a dry dock, which can accommodate vessels of up to 250 feet (76^m2) in length and 50 feet (15^m2) beam. Sheerlegs situated at the east entrance to the dry dock, have a lifting capacity of 180 tons. A line of dolphins extend southward from the western side of the dry dock. Repairs to hull, engine and boilers can be undertaken".

Line 43: For "four black and two red" read "three black and three red".

Lines 45-46: Delete and substitute:—"Leading lights.—Leading lights are shown at Port Whitby. The front light is exhibited, at an elevation of 28 feet (8^m5), from a circular concrete structure situated on the outer end of the east pier. The rear light is exhibited, at an elevation of 55 feet (16^m8), from a steel tower with an orange and black daymark, 354°, 658 feet (200^m5) from the front light".

Page 67.—Lines 26-33: Delete "Formerly" to "entrance channel" and substitute:—"A channel, 30 feet (9^m1) wide, having a depth of 4 feet (1^m2), leads between the entrance piers into Frenchman Bay. The channel was not buoyed in 1959.

Light.—A light is exhibited, at an elevation of 25 feet (7^m6), from a tower situated on the east entrance point to Frenchman Bay".

Lines 34-38: Delete and substitute:—"Danger area.—A naval gunnery range is situated to seaward of Port Whitby and Frenchman Bay. For details of the area, mariners should consult the Annual Edition of Notices to Mariners of the current year".

Line 48: After "conspicuously" insert:—"A chimney, conspicuous from seaward, is situated about a quarter of a mile inshore, $1\frac{1}{2}$ miles south-southwestward of Rouge River mouth".

Page 68.—After line 14 insert:—"Television tower.—C.F.T.O. television transmitting tower (Lat. 43°47′ N., Long. 79°16′ W.), 1,200 feet (365^m7) high, is conspicuous from the lake and can be seen from close inshore over Scarborough Bluffs. The tower is fitted with aircraft obstruction lights".

After line 23 insert:—"A groyne and breakwater, situated about one mile eastward of Coatsworth Cut, have been constructed to form a

small boat harbour. The entrance to the boat harbour, 30 feet (9^m1) wide, is situated at the eastern end of the breakwater; within the harbour are depths of 3 to 5 feet (0^m9 to 1^m5)".

Line 25: For "Ashbridge Bay" read "Ashbridges Bay".

Line 27: For "Ashbridge Bay" read "Ashbridges Bay".

After line 28 insert:—"Buoyage.—A black light-buoy showing a flashing green light and a red light buoy showing a flashing red light are moored close off the west and east entrance piers, respectively".

Lines 34-35: Delete "Welland" to end of sentence and substitute:
—"St. Lawrence Seaway has a world-wide shipping trade".

Page 69.—Line 11: For "adjourning" read "adjoining".

Line 12: Delete "The general" to end of sentence.

After line 43 insert:—"Harbour movements.—Vessels entering, leaving or changing berth within Toronto harbour should first receive permission from the Harbourmaster. The master or agent of any vessel departing or changing berth within the harbour, should contact the Harbourmaster 15 minutes prior to the move to obtain confirmation that it is in order to proceed; where possible this contact should be made by telephone.

Ships entering Toronto Harbour should contact the Harbour-master's office for instruction by radiotelephone, on frequencies 156.8 Mc/s or 2182 Kc/s, when not less than two miles off the fairway buoy when intending to enter via the Western Gap and not less than two miles off the Eastern Channel outer range light when entering via the Eastern Channel".

Page 70.—After line 5 add:—"Land has been reclaimed southward of the Exhibition Park for a distance of about half a mile along the shore. Between the reclaimed land and the breakwaters lies a channel, less than 100 feet (30^m5) wide, containing depths of 6 feet (1^m8)".

Lines 9-10: For "20 to 25 feet $(6^{m}1 \text{ to } 7^{m}6)$ " read "25 to 26 feet $(7^{m}6 \text{ to } 7^{m}9)$ ".

Line 20: Delete and substitute:—"In 1959, the Eastern Gap was dredged to a depth of 15 feet (4^m6)".

Lines 25-26: Delete "66 feet" to "stone tower" and substitute:—
"56 feet (17^m1), from a tripod, tubular tower".

After line 31 insert:—"A light is exhibited, at an elevation of 15 feet (4^m6), from a small tower situated on the inner end of the west pier at Eastern Gap".

Lines 34-36: Delete "at an elevation" to end of sentence and substitute:—"at an elevation of 70 feet (21^m3), from a tubular, tripod tower on a concrete base, situated 1,650 feet (502^m8), 323° from the front light".

Line 37: Delete and substitute:—"A fog signal is sounded from the outer end of the east pier".

Page 71.—Line 10: Delete and substitute:—"are moored about 4½ cables south-southwestward and 4 cables south-southeastward respectively,"

Line 12: For "fashing white" read "quick flashing red".

Lines 18-19: For "24 feet (7=3) over a width of 200 feet (61=0)" read "26 feet (7=9)".

Lines 20-22: Delete "A breakwater extends" to end of paragraph and substitute:—"The outer end of the south entrance pier has been extended \$50 feet (259=0) into the lake to accommodate an additional runway to the Toronto Island airport".

Line 32: For "red" read "black". For "quick-flashing green" read "flashing green".

Lines 36-37: Delete.

Lines 42-43: Delete and substitute:—"The channel leading from the Western Gap along the northern and western sides of the harbour has a least depth of 26 feet (7=9), and is marked by light and spar buoys".

Page 72.—Aiter line 3 insert:—"A light is exhibited, at an elevation of 12 feet (3=7), from a skeleton tower on the northeast corner of the south pier at the west entrance to the harbour".

Lines 9-18: Delete "All vessels" to "all-clear signal shows" and substitute:—"Red and green traffic lights are shown".

Lines 21-22: Delete "The flashing green" to end of sentence.

Line 23: For "quick-fashing" read "flashing".

Delete all reference to Wharves on pages 72 and 73, and substitute:—

WHARVES

CENTRAL SECTION

Name	Location	Length in feet	Depth in feet
Canada Malting Co. Ltd. Harbour Briek Co. Ltd. Lobisw Groceterias Co. Ltd. Gov t. of Canada—Army Oninance. Northern Power and Industrial Pipe. International Realty Co. Ltd. Maple Leaf Mills Ltd. (Toronto Elevators Division).	North of Western Channel N.W. Corner of Harbour N.W. Corner of Harbour N.W. Corner of Harbour West of Spadina Ave. Slip West Side of Spadina Ave. Slip East Side of Spadina Ave. Slip Harbourhead Wall West Side of Peter St. Slip	350 310 800 212 168 880 500 385	19 11 5 5 7-11 3-11 13-21 25
Maple Leaf Mills Ltd. (Toronto Eleva- tors Division). Maple Leaf Mills Ltd. (Toronto Eleva- tors Division). Metro Toronto Marine Yard T.H.C. Marine Terminal No. 4 Terminal Warehouses Ltd.	East Side of Peter St. Slip	557 329 1, 150 650 540	25 25 8-14 20-23 20-23

Name	Location	Length in feet	Depth in feet
Terminal Warehouses Ltd	Harbourhead Wall	1,085	20-24
T.H.C. Marine Terminal No. 6	west side of fork st. silp	645	15-21
(C.S.L.) Canada Steamship Lines—	East Side of York St. Slip	750	15–19
Pier No. 7	West Side of Bay St. Slip	745	21
Canada Steamship Lines— Pier No. 8	Foot Side of Day St. Slin	614	17-21
Canada Steamship Lines	East Side of Bay St. Slip Harbourhead Wall	550	21
Canada Steamship Lines— Pier No. 9	West Side of Yonge St. Slip	600	20-22
Eastern Canada Stevedoring Pier No.	west blue of Tonge bt. bilp	000	20-22
T.H.C. Marine Terminal No. 11	East Side of Yonge St. Slip East Side of Yonge St. Slip and	300	22-24
1.11.0. Marine Terminar No. 11	Harbourhead Wall	1,060	26
Canada Dominion Sugar Co	West Side of Jarvis St. Slip and Harbourhead Wall	1,320	24-26
T.H.C. Pier No. 14.	East Side of Jarvis St. Slip	509	26
T.H.C. Marine Terminal 15	Harbourhead Wall	840	26
T.H.C. Pier No. 16.	Harbourhead Wall	530	26
T.H.C. Marine Terminal 17 T.H.C. Pier No. 18	Harbourhead Wall		26 24–26
Gooderham & Worts Ltd	West Side of Parliament St. Slip		24-26

EASTERN SECTION

DASIERN DECITOR					
Name	Location	Length in feet	Depth in feet		
Victory Soya Mills Ltd	East Side of Parliament St. Slip	688 315	17-19 22*		
Victory Soya Mills Ltd	North Side—Keating Channel. North Side—Keating Channel.	285	22*		
National Iron Ltd	North Side—Keating Channel.	870	16*		
20British American Oil	North Side—Keating Channel.	650 600	12-13*		
Gordon Young Limited	North Side—Keating Channel. North Side—Keating Channel.	150	11*		
Toronto Dry Dock Co	South Side-Keating Channel	500	12*		
Russell Construction Co	South Side—Keating Channel South Side—Keating Channel	720 780	7* 7*		
Canada West Indies Molasses	South Side—Keating Channel	290	10*		
Lake Ont. Portland Cement	South Side—Keating Channel	390	13*		
Century Coal Company	South Side—Keating Channel.	1,386	15-17*		
T.H.C. Marine Terminal No. 1 Canadian Oils Limited	West Side of Cherry St	3,300 Pipeline	15–23 15		
Canada West Indies Molasses	West Side of Cherry St	Pipeline	23		
Canada Cement Co	North Side of Polson St	500	19		
Canada Coal Co. Ltd	North Side of Polson St	1,068	21-25 18-22		
Toronto Fuels Ltd	North Side of Ship Channel	1,390	18-24		
Warehouse Metals Ltd	North Side of Ship Channel	530	24		
Texaco Canada Ltd	North Side of Ship Channel	1,680	25		
T.H.C. VACANTImperial Oils Ltd	North Side of Ship Channel North Side of Ship Channel	300 748	25 24-25		
Lockyer Ready Mixed Materials		250	24-25		
Liquiflame Oils Ltd	North Side of Ship Channel	276	25		
Hydro Electric Power Com. of Ont Sun Oil Ltd		256 260	24 25		
Bull OII Litu	Horen blue of bulp Channel	200	20		

^{*} Continuous silting. Obtain latest information from Harbour Master.

Name	Location	Length in feet	Depth in feet
Imperial Oil Ltd. Front Industrial Storage. Front Industrial Co. Ltd. Continental Can Co. of Canada Ltd. Shell Oil Co. Ltd. T.H.C. Public Dock T.H.C. VACANT Hydro Electric Power Com. of Ont. Hydro Electric Power Com. of Ont. T.H.C. VACANT Joy Oil Co. Elias Rogers Co. (Fuel Oil) T.H.C. VACANT T.H.C. VACANT T.H.C. VACANT M.A. Hanna Co. F.P. Weaver Coal Liquifuels Ltd. Consolidated Coal & Dock. Milnes Fuel Ltd. Valley Camp Coal Co.	North Side of Ship Channel North Side of Turning Basin West Side of Turning Basin West Side of Turning Basin North Side of Turning Basin North Side of Turning Basin East Side of Turning Basin East Side of Turning Basin South Side of Turning Basin South Side of Ship Channel	521 384 350 500 600 1,100 1,100 1,455 319 225 650 300 750 500	25 24-25 5-20 9-24 25 23-25 19-24 21 23-25 23-25 17-25 23-25 17-25 25 23-25

Page 73.—Line 4: For "a depth of 12 feet (3^m7) " read "depths of 5 to 17 feet $(1^m5$ to $5^m2)$ ".

Page 74.—Lines 13-14: For "20 to 25 feet (6^m1 to 7^m6)" read "25 to 26 feet (7^m6 to 7^m9). In 1961, a slip about 1,400 feet (426^m7) long, extending from the northeast corner of the turning basin was under construction".

Line 18: For "150 feet (45^m7)" read "130 feet (39^m6)".

Lines 31-32: Delete "175 feet" to "750 tons" and substitute:—
"220 feet (67^m1) long by 45 feet (13^m7) wide, with a lifting capacity of 1.000 tons".

After line 34 insert:—"A floating derrick for lifts of up to 50 short tons is also available".

Lines 35-39: Delete "The 18-foot" to end of paragraph and substitute:—"An extensive dredging programme is at present in progress in Toronto Harbour. Chart 2065 should be consulted for the current depths".

Lines 40-41: Delete.

Page 75.—Line 4: Delete and substitute:—"Charts 2068, 2062". Line 18: For "a fairly low highway bridge" read "two highway bridges".

Line 23: Add:—"The overhead clearance is 75 feet (22m9)".

Lines 29-30: Delete "close to" to "small craft".

After line 34 add:—"Two unmarked water intake pipes extend for a distance of over three cables southeastward from the pumphouse. Chart 2062."

Page 76.—Lines 5-14: Delete and substitute:—"Danger area.— A surface firing area is situated about one mile westward of Long Branch. For details of the area mariners should consult the Annual Edition of Notices to Mariners of the current year.

Lakeview power station, with its conspicuous powerhouse and chimney, 495 feet (150^m9) high, is situated on the lakeshore midway between Long Branch and Port Credit. A pier at which coal is unloaded, 1,000 feet (304^m8) long, with 27 feet (8^m2) of water alongside, is joined to the shore by a causeway. Close northeastward of the causeway is a rock breakwater, 800 feet (243^m8) in length which affords protection to a water intake.

The channel leading to the unloading berths on either side of the pier was dredged to 27 feet (8^m2), in 1960.

Light.—Buoyage.—A fixed white light is exhibited from the outer end of the coal pier.

The outer end of the dredged channel is marked by a red light-buoy, showing a *flashing red* light and a black light-buoy, showing a *flashing green* light. Both buoys are fitted with radar reflectors. Spar buoys mark the limit of the dredged area off the pier".

Lines 21-26: Delete and substitute:—"The wharves at Port Credit lie on the east side of the entrance to the river. The east wall known as the Elizabeth Street slip has a berthing length of 800 feet (243^m8), with a least depth of 19 feet (5^m8) alongside and in the approach. The south wall is 350 feet (106^m7) long, with a depth of 9 feet (3^m4) alongside. At the western end of this berth is a shoal bank with depths of 4 to 6 feet (1^m2 to 1^m8).

A channel, 100 feet (30^m5) wide and dredged to a depth of 10 feet (3^m0), leads into the mouth of the **Credit River** to abreast a marina and boatbuilding yard situated on the southwest bank. There is a marine railway and facilities for small boat repairs at the boatyard. Situated on the northeast shore opposite the boatyard is the clubhouse of the Port Credit Yacht Club. In the basin close-off the clubhouse, are three small piers. Mariners are cautioned that extensive silting takes place in the mouth of the Credit River in spite of maintenance dredging.

Breakwater.—A stone breakwater, 1,380 feet (420^m6) long, lies parallel to, and northeastward of the east wall".

Lines 33-38: Delete and substitute:—"Three cribs, that together comprise a marine terminal with a berthing length of 500 feet (152^m4), and having a depth of 20 feet (6^m1) in the berth alongside, are situated about 3½ cables southeastward of the above breakwater. An oil pipeline, marked at intervals by stakes, leads from the head of the breakwater to the middle crib. Privately maintained lights are exhibited, from the middle and northwestern cribs, respectively".

Lines 41-43: Delete and substitute:—"the southeast end of the south wall, the rear light is exhibited, at an elevation of 45 feet (13^m7), from a skeleton steel tower with an orange daymark, situated 282°, 500 feet (152^m4) from the front light. The lights in line, bearing 282°, lead to the Credit River dredged channel.

Light.—A tri-sector light is exhibited, at an elevation of 44 feet (13^m4), from a steel tower, situated close northward of the inner end of the east wall. The white sector maintained ahead, leads into the Elizabeth Street slip".

Lines 44-45: Delete and substitute:—"Buoyage.—A red spar buoy, moored on the 3-fathom (5^m5) contour, marks the north limit of the dredged area leading into Elizabeth Street slip."

Page 77.—Lines 2-3: Delete and substitute:—"The dredged channel leading into Credit River is marked by a red and a black spar buoy moored abreast the front leading light structure".

Line 17: For "23 feet (7m0)" read "22 feet (6m7)".

Line 19: Delete "but tank cleaning is not permitted".

Line 34: After "chimney" insert:—"555 feet (169m2) high".

Lines 40-41: Delete "a conveyor" to end of sentence and substitute:—"there is a conveyor belt for the discharge of limestone".

After line 41 add:—"Spar buoys mark the limits of shoal water in the approaches to the refinery jetty".

After line 47 add:—"The outer end of a water intake pipe, situated about 2 miles northeast of Oakville, is marked by a black spar buoy".

Page 78.—Lines 10-11: Delete "39 feet" to "lantern" and substitute:—"29 feet (8m8), from a white circular structure".

After line 12 insert:—"The Oakville Yacht Club is situated on the northeast bank of Oakville Creek, one cable below the bridge. On the opposite shore is situated a marina with a marine railway and the usual facilities".

After line 16 insert:—"Midway between Bronte and Oakville is a water tower just visible over the trees fronting the shore. A large white house is situated close eastward of the tower on the foreshore".

Line 21: After "United church" insert:—"and a refinery visible over the trees".

Lines 23-28: Delete and substitute:—"Bronte Harbour, formed by the north pier, 832 feet (253^m6) in length, that extends 350 feet (106^m7) into the lake and a breakwater, 400 feet (121^m9) long, lying diagonally across the entrance to the harbour, joined to shore by a steel piling pier, has an entrance 200 feet (61^m0) wide. In 1958, a channel that varies in width from 130 feet (39^m6) in the entrance, to 60 feet (18^m3) alongside the north pier, was dredged to a least depth of 10 feet (3^m0). Coal is unloaded on to the north pier, which has a berthing length of 700 feet (213^m3). The berth is however exposed to southerly winds.

Twelve Mile Creek, which empties into Bronte Harbour, trends southwestward above the north pier and thence westward to the highway bridge, under which is a clearance of about 7 feet (6^m4), situated

about 2 cables above the boatyard of Metro Marine.

The boat repair yard and marina of Metro Marine Limited, is situated on the north bank of the creek. Ten feet (3^m0) may be carried through the channel from the harbour entrance to abreast the boatyard, but there is only 5 feet (1^m5) of water alongside the wharf, where gasoline, diesel fuel, power and water may be obtained. The boatyard has a marine railway with a capacity of 25 tons or 60 feet (18^m3) and sheerlegs with a lifting capacity of 5 tons.

A depth of 5 feet (1^m5) may be carried from the boatyard to the highway bridge and there are numerous small boat moorings and

wharves along both banks of the creek.

On entering the harbour, mariners should keep the north pier close aboard as the south limit of the dredged channel is not marked and the water is shallow outside the channel".

After line 40 add:—"Water intake pipe.—A water intake pipe whose outer end is marked by a white spar buoy, extends about $2\frac{1}{2}$ cables into the lake, from a position about $1\frac{1}{4}$ miles southward of Bronte Harbour".

Page 79.—Line 19: For "1957, it had a population of 239,625" read "1961, it had a population of 263,750".

Line 28: After "marks are" insert:—"the Burlington Skyway high-level bridge, which is illuminated throughout its length at night".

Page 80.—Lines 7-9: *Delete* "In 1956" to end of sentence and *substitute*:—"The channel between the piers has a least depth of 27 feet (8^m2), and in the approaches, 28 feet (8^m5)".

After line 9 insert:—"Note.—In 1962, the above pivot and protection pier is scheduled for removal and the low-level swing and bascule bridges will be replaced by a vertical lift bridge. This project will enable the full width of the channel to be utilized for navigation".

Line 12: After "entrance pier" add:—"and the bridge of the Burington Skyway, that spans the canal having a vertical clearance of 120 feet (36^m6) above high water level".

Lines 19-20: Delete "from a grey" to "south pier" and substitute:
—"from a lantern on the south tower of the railway bridge".

Line 24: After "radiobeacon" insert:—"synchronized with the fog signal for distance finding".

Page 81.—Line 5: For "two" read "three".

Line 7: After "highway over" insert:—"the Burlington Skyway high-level bridge spans the channel about 100 yards (91^m4) further westward".

After line 8 add:—"See note on page 80, concerning Burlington Canal reconstruction plans".

Line 12: Delete to end of page and substitute:—

PIERS, DEPTHS AND LIGHTS

Pier No.	Name	Depth in feet	Pier lights
13	Canada Steamship Lines, Ltd	20	A red light on the northwest and southwest corners.
19 21	Canadian Industries Ltd Dominion Foundries & Steel, Ltd	18 23	None. A red light on the outer end of
6	Hamilton Harbour Commissioners Service dock and marine railway North face		the pier.
7	Hamilton Harbour Commissioners, James Street slip.	10	Red over red. Passenger boats
8	Hamilton Harbour Commissioners, Cath-		only.
	erine Street		Red over green on northeast corner.
10	Hamilton Harbour Commissioners, Wellington Street	26 and 22	Green over red on northeast corner.
11	Hamilton Harbour Commissioners, Bulk Terminal wharf No. 1.		
	North face East Slip	$\begin{array}{c} 22 \\ 21 \end{array}$	Flashing red on northeast corner and flashing green on northwest corner.
12 .	Hamilton Harbour Commissioners, Bulk Terminal wharf No. 2		corner.
	North face East Slip	$\begin{array}{c} 22 \\ 22 \end{array}$	Flashing red on northeast corner and flashing green on northwest
14	Hamilton Harbour Commissioners, Bulk Terminal wharf No. 3 West, north and		corner.
23	east faces	26	None.
29	thearne Ave. West wharf	26	Flashing red on outer end of pier.
	South face	26	None.
34	West face	22	
	East face	13-17	Fixed green on southwest corner of wharf.
15A	South face International Harvester Co. Ltd. Twine Mill wharf	16	None.
15B	International Harvester Co. Ltd. Machinery wharf	18	Red light on wharf. Red light on bridge spanning Sherman
9	Royal Canadian Navy.		Inlet.
5	Basin fronting H.M.Č.S. Star	20	None.
16 .	East and west face	8 26	Fixed green light over flashing white light on northeast corner. Flashing white leading lights, in
17 18.	Steel Co. of Canada. Ore dock No. 1 Steel Co. of Canada. By-Product wharf	21 20	line bearing 198° None. Red light on pole at north end of wharf.

Page 82.—Lines 3-23: Delete and substitute:—"Wharves.—The Canada Steamship Lines wharf has a berthing length of 1,200 feet (365^m8), and a freight shed area of 80,000 square feet; there are no railway tracks on the wharf. Freight is handled by fork-lift trucks and tractors.

The Canadian Industries Ltd. wharf, about 500 feet (152^m4) in length, is used for handling fuel oil, sulphur and phosphate rock.

The Dominion Foundries and Steel Co. wharf, has a berthing length of about 2,000 feet (609^m6). Facilities include a locomotive crane, two Heyle-Paterson bridges with clams and magnets for discharging coal, ore, limestone, iron and scrap steel; the capacity is 800 tons per hour. Railway tracks lead onto the wharf, but there are no sheds.

The Hamilton Harbour Commissioners Service Dock has a marine railway with a capacity of 60 tons, or 115 feet (35^m1). There are numerous berths for small boats and repairs to small craft of all types can be undertaken at the plant. Covered storage space is available.

The Hamilton Harbour Commissioners James Street slip is used by the Harbour Security Police, who in addition to normal police duties, maintain aids to navigation within the harbour. The slip has a berthing length of about 300 feet (91^m4).

Catherine St. terminal wharf, has a berth 431 feet (131^m4) in length, situated on the east side of the wharf area which is being extended westward to provide ultimately, berths for 7 vessels. Facilities include a transit shed, mobile cranes and fork-lift trucks.

Wellington St. terminal wharf, has an outer face of 1,105 feet (336^m8) in length and 1,693 feet (515^m9) along the east face. There are a total of 8 berths; 4 having a depth of 26 feet (7^m9) alongside and the remainder 22 feet (6^m7). Facilities include mobile cranes, forklift trucks, 5 transit sheds and 10 acres of open storage space. A rail spur serves berths along the east wall.

Bulk Terminal Wharf No. 1 provides a total of 10 berths dredged from 21 to 22 feet (6^m4 to 6^m7). The wharf is leased to the Weaver Coal Co., Liquifuels Ltd., Mixed Concrete Supply, Port Crescent Sand and Canadian Vegetable Oils. There are no sheds on the wharf, but rail spurs extend along the east and west faces and mobile cranes are available.

Bulk Terminal Wharf No. 2 provides a total of 7 berths, dredged from 21 to 22 feet (6^m4 to 6^m7). The wharf is leased to the Canada Coal Corp., Myers Coal Co., Canada Crushed Stone Co. and Pigott Construction Co. Mobile cranes are available but there are no sheds or rail facilities.

Bulk Terminal Wharf No. 3 provides 6 berths dredged to 26 feet (7^m9) . The wharf is leased to the Weaver Coal Co. and M. A. Hanna Coal Co. Mobile cranes are available and a rail spur serves the berths on the west face.

The Strathearne Ave. West Wharf, completed in 1960, occupies the west side of the slip of that name and provides 7 berths dredged to 26 feet (7^m9). The wharf is occupied by Thorold Concrete Block, A. Cope & Son and the Dominion Tar and Chemical Co. No sheds or railway facilities have yet been built.

The Burlington Channel Wharf provides a total of 4 berths, one of which has depths of 22 feet (6^m7) alongside and the remainder, 26 feet (7^m9). The Sifto Salt Co. holds a lease on the wharf which has one transit shed."

Line 25: After "wide" insert:—"with a depth of 8 feet (2^m4) at the head and from 13 to 17 feet (4^m0 to 5^m2) along the northeast side. On the west side of the wharf is a small boat slip and a wharf 275 feet (83^m8) long, with depths of one to 6 feet (0^m3 to 1^m8) alongside".

Line 26: For "wharf" read "the La Salle wharf".

Lines 29-33: Delete and substitute:—"The International Harvester wharves lying adjacent to Sherman Inlet provide 3 berths with a total length of 1,550 feet (472^m4). The wharves are used primarily for handling coal and petroleum products for use in the plant behind the wharves.

The twin naval shore establishments of H.M.C.S. Patriot and Star, are situated on the south side of the basin, lying adjacent to Catherine St. wharf. The north, east and south walls total 1,855 feet (565^m4) in length and the basin has been dredged to 20 feet (6^m1).

The Steel Company of Canada Ore dock No. 2 has a berthing length of about 2,000 feet (609^m6). In 1961, construction was in progress to extend the wharf 2,000 feet (609^m6) further northward. A channel alongside the wharf, 350 feet (106^m7) wide, is marked by red spar buoys and has been dredged to 26 feet (7^m9). Two Mead-Morrison bridges are used for handling coal, ore, iron and steel scrap; each has a capacity of 1,140 tons per hour.

The No. 1 dock of the same company provides a berthing length of about 1,800 feet (548^m6), dredged to 21 feet (6^m4). Facilities include 3 Mead-Morrison bridges, each having a capacity of 600 tons per hour, a locomotive crane, and rail tracks are laid on to the dock. There are no sheds on the dock.

The Steel Company By-Products wharf is 2,300 feet (701^m0) long and dredged to a depth of 20 feet (6^m1). Facilities include a bridge crane and rail tracks are laid on to the wharf."

Line 34: After "south side" insert:—"westward of the Royal Hamilton Yacht Club".

Line 39: Delete "dock" to end of sentence and substitute:—"docks are at Port Weller and Port Dalhousie".

Lines 40-41: Delete and substitute:—"For repairs to small craft, see: Hamilton Harbour Commissioners Service Dock above".

Lines 42-43: Delete "some 3,000 tons" to end of sentence and substitute:—"from the above coal wharves".

Line 45: For "cars" read "trucks".

Line 46: Delete "at the rate of one car per hour".

Page 83.—Lines 2-3: Delete "Tree Line" to end of sentence and substitute:—"Upper Lakes Shipping Ltd., Newfoundland Great Lakes Steamships Ltd. and some 40 ocean-going cargo liner services".

Line 4: Delete "There are no pilotage requirements" and substitute:—"Pilotage is not compulsory, but is provided on application to the Deputy Harbourmaster".

Line 5: After "Leading lights.—" insert:—"The channel leading to the Strathearne Avenue slip of the Hamilton Harbour Commissioners, is marked by two black light-buoys, showing flashing green lights, two red spar buoys and a black and white light-buoy, showing a flashing white light, moored at the juncture of the above channel and that leading to the Dofasco slip".

Line 7: For "one black" read "a black and white". For "two" read "three".

Line 11: For "Hamilton By-Products Coke Ovens Ltd." read "Steel Company By-Products".

Line 13: For "flashing white" read "flashing green".

Line 15: Delete and substitute:—"Co. is marked by a red light-buoy, showing a flashing red light, a black".

Lines 17-19: Delete "and the" to end of sentence and substitute:—"Extensive construction work is being carried out in this vicinity and vessels are cautioned to remain within the buoyed channel".

Line 23: For "one black spar buoy" read "five black spar buoys".

Line 25: Delete "flashing white" to end of sentence and substitute:—"flashing green light, moored on the west limit of the shoal patch which lies northward of Bulk Terminal wharf No. 3 and the International Harvester wharves".

Lines 27-28: Delete.

Line 29: After "leading lights" insert:—"in line bearing 198°".

Page 84.—After line 16 add:—"A television transmission tower, conspicuous from the lake, is situated at Stony Creek".

Page 85.—After line 6 add:—"Caution.—An Army rifle range is situated one mile southeastward of Fifty Mile Point. The line of fire extends in a northerly direction over the lake from shore. Mariners should consult the Annual Edition of Notices to Mariners of the current year for the details".

After line 8 add:—"There are two small wharves at Grimsby Beach".

Lines 22-23: Delete "the remains of an old pier" and substitute:— "a small stone breakwater".

Line 24: Delete "some of" to end of sentence.

After line 28 add:—"A conspicuous water tower, is situated about 1½ miles westward of Jordan Harbour".

Lines 29-37: Delete.

Line 45: For "Muir Brothers Dry Dock Limited" read "Port Dalhousie Shipyard and Drydock, a subsidiary company of the Port Weller Dry Dock Co."

Page 86.—Line 3: For "16 feet (4^m9)" read "17 feet (5^m2)".

Line 6: For "10 feet (3^m0)" read "17 feet (5^m2)".

Lines 6-7: Delete "However" to end of sentence and substitute:—
"Within the harbour there was a least depth, in 1960, of 11 feet (3^m4),
except in the approach to the old lock of the Second Welland Canal,
where the water shoals to 5 feet (1^m5)".

Line 10: After "Harbour" insert:—"A highway swing bridge spans the Third Welland Canal close above the lock".

After line 13 insert:—"The Dalhousie Yacht Club is situated at the south end of the east pier. Alongside the angled wharf at the foot of the above pier are depths of 11 feet (3^m4). Adjoining the wharf on the east side of the harbour, is a ruined wharf, 1,000 feet (304^m8) in length. Adjoining the ruined wharf southwestward is a concrete faced wharf, 410 feet (125^m0) long, with depths of 12 feet (3^m7) alongside.

On the west side of the harbour at the foot of the west pier, is a wharf 520 feet (158^m5) long, with depths of 4 to 14 feet (1^m2 to 4^m3) alongside. Along the south section of the wharf are small boat moorings and Henry's Boat Works, where gasoline and water may be obtained and hull and engine repairs carried out.

At the south end of the central pier, abreast Lock No. 1, is situated the conspicuous hosiery mill of Lincoln Fabrics".

Line 30: Add:—"In 1961, the shipyard and drydock were closed".

Lines 39-44: Delete and substitute:—"Two sunken barges, whose bows are visible at low stages of the lake, lie about one cable offshore, half a mile eastward of the harbour entrance.

A drive-in theatre screen, conspicuous from the lake, is situated about one mile eastward of the harbour entrance".

After line 46 insert:—"Anchorage area.—An anchorage area has been established off Port Dalhousie for vessels awaiting transit of the Welland Canal or for other reasons. For the limits of the area mariners should consult Chart 2063".

Page 87.—Line 1: Delete and substitute:—"Chart 2063".

Lines 23-24: Delete "It gives" to end of sentence and substitute:—
"It operates on call during the day, and does not operate at night or in winter".

After line 37 add:—"Gasoline, oil and water are available from Shepards marina, situated at the southwest end of the slip and there are small boat slips at the northwest end".

Page 88.—Line 22: For "have" read "formerly operated".

Lines 45-46: Delete and substitute:—"The Coast Guard wharf is about 150 feet (45^m7) long, with a depth of 14 feet (4^m3) alongside".

Page 89.—Line 40: Add:—"It is fitted with a radar reflector".

Page 90.—Line 38: After "long" insert:—"with 12 feet (3^m7) of water alongside".

Page 91.—Line 4: Delete and substitute:—"Charts 2042, 2174".

Line 26: For "25 feet" read "27 feet".

Line 33: Delete.

Page 93.—Line 1: Delete "Publications" to end of page and substitute:—"Masters navigating the Welland Canal should be in possession of "The St. Lawrence Seaway Masters' Handbook", which contains the rules and regulations for users of the Seaway. The handbook may be obtained from the Queen's Printer, Ottawa—Price \$2.00".

Page 94.—Delete.

Page 95.—Delete.

Page 96.—Delete.

Page 97.—Delete.

Page 98.—Delete.

Page 99.—Lines 2-36: Delete.

Lines 43-44: Delete "Port Weller" to end of sentence and sub-

stitute:—"Coal and sand are discharged at Port Weller".

Lines 45-49: Delete and substitute:—"A section of the west entrance wall. 1,225 feet (373^m4) long, with 27 feet (8^m2) of water alongside, can be used for storage purposes: the northern 570 feet (173^m7) is used by the Empire Hanna Coal Co.; the adjoining 620 feet (189^m0) is used by the W. R. Cameron Co. for the storage of coal, sand and scrap. On the east wall, a section 485 feet (147^m8) long is used as a coal wharf by the Empire Hanna Coal Co."

Page 100.—Line 2: After "Radiobeacon.—" insert:—"Reporting buoy.—".

Line 5: Delete "is operated" and substitute:—"is synchronized

with the fog signal for distance finding".

After line 11 insert:—"A light-buoy with black and white vertical stripes, showing a flashing white light, is moored $2\frac{1}{2}$ miles northward of Port Weller breakwater head. Vessels intending to transit the Welland Canal, when abreast the buoy, should report to the despatcher in accordance with instructions contained in the St. Lawrence Seaway Masters' Handbook".

Line 13: For " $23\frac{1}{2}$ feet $(7^{m}2)$ " read " $25\frac{1}{2}$ feet $(7^{m}7)$ ".

Line 18: For "Nos. 1 to 7" read "Nos. 2 to 7".

Line 19: For "with 30 feet" read "with a minimum of 30 feet".

Lines 19-20: Delete "Their usable" to end of sentence.

Lines 21-28: Delete.

Lines 33-35: Delete "The maximum" to end of sentence and substitute:—"Vessels of up to 715 feet (218m0) in length and 72 feet (21m9) in beam, may transit the Seaway during the navigation season. Vessels of up to 730 feet (222m5) in length and 75 feet (22m9) beam may, with special instructions from the St. Lawrence Seaway Authority, transit the Seaway during the navigation season".

Page 101.—Lines 24-25: Delete "and, for the present" to end of sentence".

Line 34: For "120 feet (36m6)" read "117 feet (35m7)".

Page 102.—Line 8: For "655 feet (198^m1)" read "730 feet (222^m5)".

Line 9: After "length" insert:—"The maximum beam of a vessel that can be docked is 75 feet (22^m9)".

Page 103.—Line 2: For "25 feet (7m6)" read "27 feet (8m2)". Line 3: After "800 feet (243m8)" insert:—"The limits of the dredged area are marked by four red and four black spar buoys".

Line 30: For "22 feet (6^m7)" read "25 feet (7^m6)".

Lines 33-34: For "22 feet (6m7)" read "27 feet (8m2)".

After line 34 insert:—"Buoyage.—The west limit of the channel between Nos. 3 and 4 Bridges, is marked by four black light-buoys, showing flashing white lights and three black spar buoys".

After line 41 add:—"A high-level highway bridge situated about

2 cables below Bridge No. 4 was under construction in 1961".

After line 45 insert:—"Note.—Mariners may expect eddies and cross currents below Lock No. 3 and Lock No. 2 from the outflow of pondage pool and waste weir respectively".

Page 104.—For "25-foot (7^m6)" read "25½-foot (7^m8)".

Line 29: For "20 feet (6^m1)" read "27 feet (8^m2)".

Lines 36, 39 and 40: For "VBX" read "VDX22".

Line 45: For "25 feet (7^m6)" read "24 feet (7^m3)". For "Another wharf" read "The Beaver Board wharf".

Page 105.—Lines 15-17: Delete "Two" to end of sentence and substitute:—"Four Hydro-electric Power Commission transmission lines, with overhead clearances of between 130 and 163 feet (39^m6 and 49^m7), span the channel at intervals of up to one mile south of Bridge No. 11".

Lines 25-26: Delete "in 28 feet" to end of sentence.

Line 28: For "700 feet (213m4)" read "600 feet (182m9)".

Page 106.—Line 27: For "26 feet (7m9)" read "22½ feet (6m8)".

Page 107.—Line 2: Delete "at the Port Colborne Iron Works" and substitute:—"There is a dry dock at the end of the channel which, in 1959, was not in operation".

Line 6: For "a concrete wharf" read "Rameys Bend wharf, a concrete structure". For "27½ feet (8^m1)" read "27 feet (8^m2)".

Line 11: For "27 feet (8^m2)" read "26 feet (7^m9)".

Line 13: For "company that" read "Robin Hood Mills that".

Lines 16-17: For "450 feet (137m2)" read "550 feet (167m6)".

Line 17: For "27 feet (8m2)" read "26 feet (7m9)".

Line 36: For " $14\frac{1}{2}$ feet (4^m5) " read "14 feet (4^m3) ".

Line 46: For "28-foot (8^m5)" read "30-foot (9^m1)".

Page 108.—Lines 9-10: Delete "The nearest" to end of sentence and substitute:—"There is a hospital at Port Colborne".

Line 19: For "southern" read "northern".

Line 20: For "14 feet (4^m3)" read "14½ feet (4^m4)".

Line 22: For "28 feet (8m5)" read "22 to 30 feet (6m7 to 9m1)".

Line 23: After "wharf" insert:—"An outcrop of rock, with a depth of 22 feet (6^m7) over it, parallels the west wharf southward of Sugarloaf Street. A timber boom has been moored against the outer face of the wharf before the fuel station of the Canadian Oil Companies Ltd. to hold vessels off the rock ledge. Vessels docking at this wharf should proceed with great caution".

Line 24: After "alongside" insert:—"The southern 1,120 feet (341^m4) is used by the Canadian Furnace Company, and contains two conspicuous bridges used for off-loading ore. The northern portion of the wharf is used by the International Nickel Company for unloading ore and the Lannan Coal Company for coal and stone".

Lines 40-41: For "18 feet (5^m5)" read "16 feet (4^m9)".

Lines 42-43: Delete "The southerly" to end of sentence and substitute:—"The outer western side of this channel is marked by two black spar buoys".

Lines 45-46: Delete "The eastern" to end of sentence and substitute:—"There is a least depth of 16 feet (4^m9) in the slip and on the east side of the eastern pier".

Page 109.—Line 2: For "28 feet (8m5)" read "30 feet (9m1)".

Line 14 add:—"The light tower is floodlit on the seaward side at night".

Line 18: For "operated" read "synchronized with the fog signal at the outer light for distance finding purposes".

Line 33: For "VBX" read "VDX22".

Lines 34-35: Delete "They shall" to end of sentence and substitute:—"in accordance with the instructions contained in the St. Lawrence Seaway Master's Handbook".

Lines 38-45: Delete and substitute:—

"2003 Kc/s-Working.

2182 Kc/s—Safety and Calling. 156.8 Mc/s—Safety and Calling.

156.7 Mc/s—Working (Canadian stations only).

156.6 Mc/s-Working (Eisenhower station only)."

Lines 46-48: Delete.

Page 110.—Lines 2-4: Delete.

Page 113.—Lines 11-12: Delete "There is" to end of sentence. Lines 35-36: Delete "087°" to "dock" and substitute:—"on the western side".

Page 114.—Line 2: For "4 to 5" read "about 8".

Line 3: For "5 to 7" read "9".

After line 39 add:—"In 1961, dredging was in progress to provide a channel leading directly into Black Rock Canal, 1,500 feet (457^m2) south of the existing north entrance. A breakwater was also under construction southward of the present channel to afford protection to the approaches of the Black Rock Canal. Mariners should consult the latest Notices to Mariners and the U.S. Lake Survey charts of the area before using the north entrance".

Page 115.—Lines 27-30: Delete.

Line 45: Add:—"The outer black light-buoy and the red light-and-bell-buoy are fitted with radar reflectors".

Page 116.—Line 14: For "is 16 to 19 feet $(4^m9 \text{ to } 5^m8)$ deep" read "has general depths of 21 feet (6^m4) with the exception of 1,000 feet (304^m8) at the east end of the canal which has depths of 16 to 19 feet $(4^m9 \text{ to } 5^m8)$ ".

Lines 32-34: Delete and substitute:—"Niagara Frontier Port Authority.—The slip of this agency is situated close north of the Merchants Refrigerating Co. wharf and is 1,000 feet (304^m8) long, 160 feet (48^m8) wide and is 25 feet (7^m6) deep".

Lines 43-48: Delete and substitute:-

Length overall	461.5	621.5
Length on keel blocks		576.0
Width at bottom	44.5	72.9
Width at top	58.2	93.0
Width at entrance	58.2	72.0
Depth available	16.2	13.6"

Page 117.—Line 2: Delete and substitute:—"Floating Dock (Lifting capacity 3,000 tons)".

Lines 3-10: Delete.

Line 18: After "light-buoy" insert:—"fitted with a radar reflector".

Lines 24-26: Delete and substitute:—"There are several small wharves at Fort Erie Beach".

Page 118.—Lines 14-15: Delete "A stone" to end of sentence.

Line 19: For "The bay" read "Abino Bay lying".

Line 28: Delete "small".

Line 29: Add:—"with a depth of 5 feet (1^m5) alongside the head. Two lights, privately maintained, in line, lead through the channel to the wharf".

Line 32: Add:—"and the light-tower is floodlit at night on the seaward side".

After line 38 add:—"A gas pipeline extends from shore three-quarters of a mile in a southerly direction, about one mile northwest-ward of Point Abino light-structure".

Page 120.—Lines 17-29: Delete.

Page 121.—After line 29 add:—"Caution.—Oil and gas drilling towers have been established in Lake Erie. A quick flashing white light is exhibited from the towers at night and an automatic fog signal sounds one blast of 2 seconds duration followed by 18 seconds silence. The towers are of a temporary nature".

Page 124.—After line 46 insert:—"Caution.—Submerged gas collector pipelines extend up to 6 cables southward from Mohawk Point".

Page 125.—Line 41: For "depth" read "least depth". Line 43: After "wharf" insert "80 feet (24^m4) in length"

Page 126.—Lines 2-3: Delete "is one of the most important harbours".

Line 3: Delete "car ferry".

Line 7: After "harbour" insert:—"the inner section of the east pier has collapsed".

Line 8: For "19 feet (5m8)" read "24 feet (7m3)".

Line 11: For "18 feet (5^m5)" read "21 feet (6^m4)". For "car ferry read "disused car ferry".

After line 12 insert:—"A rock outcrop, with a depth of 15 feet (4^m6) , extends 30 feet (9^m1) into the channel from the west pier, 150 feet (45^m7) south of the rear range light".

Line 15: For "19 feet (5^m8)" read "22 feet (6^m7)".

After line 18 insert:—"The manufacturing plants of the Electric Reduction Company and Sherbrooke Metallurgical Company are situated northward of the railway slip, and a plant for the manufacture of fertilizers is situated between the above slip and the old feeder canal".

Lines 22-24: Delete and substitute:—"On the west bank of the river abreast the disused ferry slip are several small piers and stages utilised by the small fishing fleet and the Dunnville Sailing Club".

Line 30: For "rear" read "front". Line 41: For "At" read "about". Page 129.—Line 7 add:—"300 and 650 feet (91^m4 and 198^m0) in length, extending from the east and west entrance points, respectively. There are several small wharves and a fish house in the inner harbour".

Line 8: For "10 feet (3^m0)" read "7 feet (2^m1)". Line 9: For "8 feet (2^m4)" read "6 feet (1^m8)".

Lines 10-14: Delete and substitute:—"Light.—A tri-coloured light is exhibited, at an elevation of 25 feet (7^m6), from a steel tower, situated on the north bank of Nanticoke Harbour".

Line 24: For "It is the centre of the fishing industry" read "It

is one of three main fishing centres".

After line 33 add:—"Vessels secure to the west pier in fair weather, but with southerly winds there is considerable swell and the borths become untenable for small ereft.

berths become untenable for small craft.

A rubble breakwater arm, 150 feet (45^m7) in length, extends westward from the foot of the east breakwater and affords protection from the swell to the fishing vessels moored to the west bank of the Lynn River close below the bridge.

Eight feet (2^m4) of water may be carried to the lift bridge spanning the Lynn River. Above the bridge there are depths of 3 to 6 feet (0^m9 to 1^m8) for about half a mile, to where a dam at the lower

end of Silver Lake prevents further navigation.

Black Creek empties into Lynn River from the eastward about a quarter of a mile above the bridge and has from 3 to 6 feet (0^m9 to 1^m8) of water in mid-channel for about half a mile upstream.

There are berths for small craft alongside both river banks and a marina and boat hoist is situated on the east bank of the Lynn

River close above the lift bridge".

After line 40 insert:—"A group of boulders, with less than 6 feet (1^m8) of water over them, lie about 75 feet (22^m9) out from, and in line with, the eastern pier at the entrance to the harbour".

Lines 41-46: Delete and substitute:—"Lights.—A light is exhibited, at an elevation of 16 feet (4^m9), from the outer end of the

east pier.

A light is exhibited, at an elevation of 20 feet (6^m1), from the west entrance to the Lynn River abreast the rubble checkwater at the foot of the east breakwater".

Page 130.—Line 13: For "extending lakeward from the ferry slip" read "close westward of the alignment of the leading lights".

After line 13 add:—"Submarine pipeline.—A submarine pipeline extends in a west-northwesterly direction to shore, from a position 9 cables south-southeastward of the entrance to Port Dover. There is a depth of about 14 feet (4^m3) over the seaward end".

Line 20: Delete "fishing".

Line 21: For "small" read "ruined". After "wharf" insert:—"with a few piles showing above water".

Lines 22-23: Delete "The outer end" to end of sentence.

After line 27 insert:—"Wharf.—An L-shaped Government wharf, 501 feet (152^m7) long and 70 feet (21^m3) wide at the face, with a depth of 7 feet (2^m1) alongside, is situated 1½ miles southwestward of Normandale".

Lines 35-37: Delete.

Page 131.—Lines 19-31: Delete and substitute:—"950 feet (289^m5) and 55 feet (16^m8) at the head. A sheet pile breakwater situated 100 feet (30^m5) northeastward of the wharf provides a sheltered slip for small craft. The slip was dredged to 5 feet (1^m5) in 1959, has 90 feet (27^m4) of berthing space at the head and a small boat ramp in the southwest corner.

There is a 90-foot (27^m4) wide basin adjacent to the wharf on the southwest side with 6 feet (1^m8) of water. Gasoline, water and ice may be obtained from a small pier at the inshore end of the wharf

and on the north side of the basin are several boat sheds.

Leading lights.—The front light is exhibited, at an elevation of 28 feet (8^m5), from a red skeleton tower with an eliptical daymark, situated on the outer end of the wharf. The rear light is exhibited, at an elevation of 40 feet (12^m2), from a pole, 1,000 feet (304^m8), 302° from the front light. The lights, in line bearing 302°, lead to the wharf through a channel dredged to 6 feet (1^m8)".

Line 38: After "outer end" add:—"A channel, 60 feet (18^m3) wide and 5 feet (1^m5) deep has been dredged along the west side of the wharf to a small boat ramp at the foot of the wharf. A dredged channel leading to Booths marina is situated close eastward and a

submerged gas pipeline is landed at the foot of the wharf."

Page 132.—After line 24 add:—"Big Creek Shooting Club, with its small wharf, is situated in the southwest corner of Inner Bay".

Page 133.—Lines 18-19: Delete "spar buoy" to end of sentence and substitute:—"light-buoy, showing a flashing white light, is moored off the northern side of the bar. In 1961, the anchorage behind Bluff Bar was reported to have silted to a considerable extent".

Page 134.—Lines 5-6: Delete "and a car" to end of sentence.

Line 7: For "Fishing" read "Farming".

Line 10: For "2,855 feet (870m2)" read "4,129 feet (1,258m5)".

Lines 14-15: Delete "the turning basin" to end of sentence and substitute:—"a turning basin 350 feet (106^m7) at its widest point, lies just inside the rear leading light. Large coal stocks are maintained on the west pier by Imperealle Fuels and the Valley Camp Coal Co.

On the east side of Otter Creek for a distance of 700 feet (213^m3) below the bridge, the wharves are in ruins and the sheds in a state of disrepair. Along the west shore are several small wharves, the warehouse of the Port Burwell Fishermans Cooperative, and a marina with a marine railway capable of handling boats to a length of 75 feet

(22^m9). Gasoline is available and repairs carried out. The highway bridge spanning Otter Creek has an overhead clearance of 7 feet (2^m1)".

Lines 18-19: Delete "at about the middle" to end of sentence.

Lines 20-27: Delete "The following" to end of paragraph and substitute:—"In 1959, the approach channel to the entrance was dredged to 22 feet (6^m7); the inner harbour past the former car ferry slip to 18 feet (5^m5) and the remainder of the harbour from 14 to 16 feet (4^m3 to 4^m9). Silting is rapid and depths cannot be relied upon".

After line 34 add:—"A fog signal is sounded at the above light".

Line 39: Delete

Page 135.—Line 13: For "and a large warehouse" read "visible".

Line 16: Delete "an important fishing centre".

Line 23: Delete "In 1951" to end of sentence and substitute:— "In 1961, the outer 131 feet (39^m9) of the east pier was submerged

and the position marked by a few piles".

Line 42: Add:—"Approaching from the westward, the grain elevators are concealed until almost opposite the breakwater entrance. The oil storage tanks at the foot of the west breakwater are, however, conspicuous from seaward".

Lines 45-46: Delete "Canadian National" to end of sentence and

substitute:—"London and Port Stanley Railway".

Page 136.—Lines 2-4: Delete and substitute:—"Sova beans and grain products are the main exports from Port Stanley and coal is imported; large stocks being maintained on both piers southward of the elevators. A few fishing tugs operate from Port Stanley and normally berth on the east side of the creek below the bridge.

However, with southerly winds a heavy surge enters the harbour and small craft drawing 4 to 5 feet (1m2 to 1m5) take shelter above

the bascule bridge".

Line 20: Add:—"A grain elevator with a capacity of 55,000 bushels adjoins the warehouse southward".

Line 23: For "a pier" read "a ruined pier".

Lines 25-26: Delete and substitute:—"In 1961, the wreck of a dredge obstructed the slip which is no longer used".

Line 37: Add:—"Part of the northwestern section of the east breakwater has collapsed and is now submerged sufficiently to allow

small boats and outboards to use the channel provided".

Lines 38-42: Delete and substitute: "Depths. In 1960, the approach to the outer breakwaters was dredged to 23 feet (7m0): 22 feet (6^m7) to the disused slip and 21 feet (6^m4) to the head of the harbour. The outer approach is marked by two black and two red spar buoys. Mariners are cautioned that frequent dredging is required to maintain the above depths".

Line 49: For "latticed, steel pole" read "white pyramidal

structure"

Page 137.—Lines 16-18: Delete "but large, old warehouses" to end of sentence.

Lines 30-34: Delete and substitute:—"The ruins of Morpeth pier are situated $7\frac{1}{2}$ miles northward of Pointe aux Pins. In 1961, only a cluster of piles were visible at the outer end. About a quarter of a mile northward of the ruined pier are situated two piers about 1,000 feet (304^m8) apart. The piers lead to gas wells situated at their outers ends and are privately owned and maintained."

Page 138.—Lines 2-3: Delete "at an elevation" to end of sentence and substitute:—"at an elevation of 42 feet (12^m8), from a steel lattice tower, situated on the southern extremity of Pointe aux Pins".

Line 6: Delete "hotels" to end of sentence and substitute: - "and

hotels".

Lines 13-14: Delete.

Line 15: Delete and substitute:—"The Lake Erie Coal Company have two gantry cranes with a capacity of 600 tons per hour and operate a bulk freighter service to U.S. ports on Lake Erie. There is good shelter from all winds alongside this wharf".

Line 18: For "2,080 feet (634^m0)" read "2,088 feet (636^m4)".

For "1,200 feet (365^m8)" read "1,000 feet (304^m8)".

Line 19: For "783 feet (238m7)" read "787 feet (239m8)".

Lines 22-25: Delete "Other craft" to end of paragraph and substitute:—"There are some wharves on the north side of the slip in a state of disrepair or ruin. The Erieau Shipbuilding Company is located at the east end of the slip on the north side. It has a 100-ton or 125-foot (38^m1) capacity marine railway and a 30-ton crane. Engine and hull repairs can be carried out and gasoline and diesel oil are available.

Southward of Shirley Point at the west entrance to Rondeau Harbour is a sheet pile wharf, 500 feet (152^m4) in length, with two 175-foot (53^m3), and five 150-foot (45^m7) timber jetties, extending eastward from the wharf for the use of fishing vessels and small craft. The basin is protected by a breakwater 500 feet (152^m4) long, which lies parallel to, and 300 feet (91^m4) distant from the wharf. There is a least depth of 9 feet (2^m7) within the basin and alongside the jetties. With southerly winds the basin is reported to be untenable owing to the swell entering the harbour.

A warehouse is situated on the west pier abreast the rear leading light and the Rondeau Fishermans Cooperative building is situated close northward. Gasoline, diesel oil and water are available at the

latter building".

Line 27: For "20 feet (6^m1)" read "22 feet (6^m7)". Line 28: For "19\frac{3}{4} feet (6^m0)" read "21 feet (6^m4)".

Lines 30-31: For "18 feet (5m5)" read "16 feet (4m9)".

Line 42: For "1,350 feet (411m5)" read "1,251 feet (381m3)".

Page 139.—After line 5 add:—"The Erieau Yacht Club is situated on the southwest shore of Rondeau Bay.

Buoyage.—Three red and three black spar buoys mark the channel into Rondeau Bay abreast the breakwater protecting the small boat basin".

Lines 14-15: Delete and substitute:—"Wheatley Harbour (Lat. 43°03′ N., Long. 82°28′ W.) is a flourishing fishing centre and harbour of refuge, situated 10¼ miles northward of Pelee Point".

Lines 17-18: For "6 feet (1m8)" read "8 feet (2m4)".

Line 19: Delete and substitute:—"On the east side of the slip is situated the plant and cold storage warehouse of Omstead Fisheries which has a storage capacity of 12 million pounds of frozen fish and farm produce. There is a marine slip at Wheatley with a capacity of 10 tons, gasoline, oil and water are available and minor repairs undertaken.

The L-shaped wharf about one mile northeastward from Wheatley

is ruined and underwater obstructions extend off the head".

After line 33 add:—"A wharf at Port Alma, constructed by a company drilling for gas, has depths of 6 to 9 feet (1^m8 to 2^m7) along-side. About three miles eastward at **Port Crewe** is another wharf, with less than 4 feet (1^m2) of water alongside, affording no shelter to small craft. In 1961, the wharf at Romney was in ruins with only piling visible above water."

Lines 34-36: Delete and substitute:—Caution.—Submerged gas pipelines extend $8\frac{1}{2}$ miles offshore from Port Alma and $2\frac{1}{2}$ miles from the village of Ouvry. Mariners should avoid anchoring in the vicinity of the pipelines, the position of which can best be seen from the chart.

Fishing stakes.—In the bay contained between Pelee Point and Pointe aux Pins, fishing stakes may be encountered to a distance of 2 miles from shore in depths of up to 6 fathoms (11^m0)".

Page 140.—Line 21: For "58 feet (17^m7)" read "70 feet (21^m3)". For "three" read "two".

Line 24: After "light-structure" add:—"synchronized with the

fog signal for distance-finding purposes".

After line 24 add:—"A black and white light-buoy, showing a flashing white light and fitted with a radar reflector, is moored one mile southward of Southeast Shoal light-structure".

Page 141.—Line 2: For "23 feet (7^m0)" read "22 feet (6^m7)". Line 21: Delete "12 feet" to "028°" and substitute:—"11 feet (3^m4) of water over it, lies about 3 miles north-northeastward".

Line 25: After "flashing red light" insert:—"and fitted with a

radar reflector".

Line 40: For "16 to 19 feet (4m9)" read "14 to 19 feet (4m3)".

Page 142.—Line 13: After "shore" insert:—"Four wooden piers, 40 feet (12^m2) in length, with 4 to 5 feet (1^m2 to 1^m5) of water alongside, extend at right angles from the south side of the crib providing protection for small craft".

Line 16: Delete "in 1954" to end of sentence and substitute:—"to depths of 5 to 8 feet (1^m5 to 2^m4). A timber jetty, 280 feet (85^m3) long with 5 feet (1^m5) of water alongside, lies parallel to the east breakwater and three small piers parallel to the North wharf at the head of the harbour. Gasoline and diesel oil are available".

Page 143.—Line 14; For "160°, $1\frac{1}{2}$ miles" read "168°, $2\frac{1}{4}$ miles". Line 17: For "080°, distant $2\frac{3}{8}$ miles" read "099°, distant $2\frac{1}{4}$ miles".

After line 26 add:—"There is a marina in South Bay".

Line 36: For "one mile 120°" read "three-quarters of a mile 131°".

Page 144.—Line 2: Delete "with 12" to ", seven-eighths" and substitute:—"9 feet (2^m7) of water over it, lies 036°, three-quarters".

Line 4: For "17 miles, 185°" read "about 2½ miles south".

Line 18: Add:—"Light-buoy "A" is fitted with a radar reflector".

Page 146.—Line 6: Delete and substitute:—"In 1959, the depth in the approach channel and alongside the east side of the wharf was 20 feet (6^m1). A turning basin 600 feet (182^m8) wide, lying close southward of the wharf was dredged to the same depth".

Lines 7-9: Delete and substitute:—"Breakwater.—A detached breakwater, 1,000 feet (304^m8) in length, lies about one-third of a mile

southward of Leamington wharf.

Light.—Fog signal.—Light-buoy.—A light is exhibited, at an elevation of 26 feet (7^m9), from a square, skeleton tower, situated on the east end of the breakwater.

A fog signal is sounded from the light-structure.

A red light-buoy, showing a *flashing red* light, is moored close off the west end of the breakwater".

Lines 16-18: Delete.

Lines 21-22: Delete "and 100 feet" to end of sentence.

Line 23: Delete "which is marked by a buoy".

Lines 26-27: Delete "and it is marked by a buoy".

Lines 28-29: Delete and substitute:—"Seacliff Park, a summer

resort, lies westward of the head of the wharf".

Lines 35-36: Delete "shipping point" to end of sentence and substitute:—"fishing and farming centre and the harbour affords the best shelter between Pelee Point and Bar Point; however the harbour is exposed to southeasterly gales".

Line 38: For "four" read "three".

Line 39: Delete "and Detroit, Toledo".

Line 42: For "1956, was 2,884" read "1961, was about 3,100".

Line 45: For "870 feet (265^m1)" read "859 feet (261^m8)".

Page 147.—Lines 2-3: Delete "There are" to end of paragraph and substitute:—"At the head of the basin are seven small piers extending at right angles to the shoreline, with depths of 9 feet (2^m7) alongside, for the use of fishing tugs and small craft.

A Fisherman's Cooperative warehouse and a Government warehouse are situated on the east pier. Stocks of coal are maintained on the west pier and gasoline and diesel oil are also available. Minor engine repairs can be undertaken".

Lines 4-6: Delete and substitute:—"Depths.—In 1961, there was a depth of 18 feet (5^m5) in the approach channel and 16 feet (4^m9)

alongside the inner end of the west pier".

After line 11 add:—"Leading lights mark the centre line of the dredged channel into Kingsville Harbour. The front light is exhibited, at an elevation of 25 feet (7^m6), from a lattice tower with a diamond-shaped, orange-coloured daymark, situated on the outer end of the westernmost pier at the head of the harbour. The rear light is exhibited, at an elevation of 38 feet (11^m6), from a similar structure, 300 feet (91^m4), 312° from the front light. The lights in line, bearing 312°, lead into the harbour.

A black spar buoy, with a red reflector, is moored on the line of the leading lights, about half a mile from the outer breakwater".

Line 24: For "12 feet (3^m7)" read "9 feet (2^m7)". For "seven-

eights of a" read "one".

Lines 33-36: Delete "830 feet" to end of paragraph and substitute:—"495 feet (150^m9); at the eastern end of this breakwater is the harbour entrance, 100 feet (30^m5) wide, thence a breakwater 605 feet (184^m4) long, extends eastward to the shore. There is reported to be a depth of 4 feet (1^m2) in the harbour".

Line 39: For "3 fathoms (5^m5)" read "2 fathoms (3^m7)".

Page 148.—Line 5: For "flashing white" read "quick flashing white".

Lines 5-6: For "about 9 cables" read "one mile".

Lines 8-9: For "less than a quarter of a mile south" read "half a mile northward".

Page 151.—Lines 29-30: Delete "being at least" to "(182^m9) wide" and substitute:—"having a controlling depth of 21 feet (6^m4) in the easterly half and 27 feet (8^m2) in the westerly half".

After line 42 add:—"Caution.—Dredging is in progress in the Amherstburg Channel and the aids to navigation may be moved temporarily from their charted positions to mark the working area".

Line 47: For "is operated" read "is synchronized with the fog

signal for distance finding purposes".

Line 50: For "Bar Point East Channel" read "East Outer Channel".

Page 152.—Line 22: After "Wharf" add:—"and Buoy Depot". Line 23: For "1956" read "1959".

Line 25: Add:—"Gasoline and water are available at Duffy's wharf close northward of McQueens Marine".

Line 31: For "a highway bridge" read "two highway bridges".

Page 153.—Lines 7-47: Delete "It is 21 feet" to end of page and substitute:—"In 1959, the Amherstburg Channel was divided into two adjacent channels each 300 feet (91^m4) wide. The easterly channel has a controlled depth of 21 feet (6^m4) and the westerly 27 feet (8^m2). The channels are adequately buoyed".

Page 154.—Line 31: After "territory" insert:—"but leased to the U.S. for a period of 99 years".

Lines 38-39: Delete.

Line 47: For "skeleton tower" read "square tower".

Page 155.—Line 13: After "upper end" add:—"The island is generally bare with the exception of a few trees at the northern end".

Page 156.—Line 16: After "landing wharves" insert:—"for small craft and barges".

Line 22: Delete "Ojibway".

Lines 24-25: Delete "the Windsor, Essex and Lake Shore Electric Railway".

Lines 29-33: Delete to "dock fenders" and substitute:—"The town of Ojibway, situated between La Salle and the southern part of the city of Windsor, has a slip 2,100 feet (640^m1) long, 400 feet (121^m9) wide on the harbour line and 200 feet (61^m0) wide between dock fenders. The Ojibway Mine of the Canadian Rock Salt Co. Ltd., is located a mile down river from the slip. A rock fill breakwater extends about 600 feet (182^m8) from shore near the mine, to a 400-foot (121^m9) long loading dock, which parallels the channel. The Ontario Hydro-electric wharf, about 600 feet (182^m8) long, lies parallel to the river three-quarters of a mile upstream from the slip".

Line 36: For "Three" read "Two".

Lines 41-43: Delete "The berth" to end of sentence and substitute:—"The Windsor Harbour Commissioners wharf, now disused, is 856 feet (260^m9) long and has a depth of 16 feet (4^m9) alongside. Dieppe Park, borders the river adjacent to, and northward of the Harbour Commissioners wharf, there are no berths alongside".

Page 157.—Lines 19-20: Delete "The Detroit, Belle Isle" to end of sentence.

Line 37: For "Canadian Salt Co. plant" read "Canada Steamship Lines dock".

After line 40 add:—"Pipeline.—A submerged pipeline crosses the river about 1,000 feet (304^m8) below the power cable. The shore ends of the pipeline are marked by signs and vessels should not anchor in this vicinity".

Page 158.—Line 2: For "18 feet (5^m5)" read "12 feet (3^m7)".

Lines 2-3: Delete "and also" to end of sentence.

Line 9: For "a pipeline" read "several pipelines".

Page 163.—Lines 40-47: Delete.

Page 164.—Lines 2-34: Delete.

Page 167.—Line 17: For "flashing white" read "flashing green".

Page 168.—Line 22: Delete.

Lines 24-25: Delete "and the terminus" to end of sentence.

After line 29 insert:—"Light.—A light is exhibited, at an elevation of 20 feet (6^m1), from a lantern on a steel pipe, situated on the west entrance wall to Pike Creek".

Line 36: After "entrance channel" insert:—"85 feet (25m9) wide".

Line 39: For "580 feet (176m8)" read "1,069 feet (325m8)".

Line 40: For "330 feet (100m6)" read "630 feet (191m9)".

Line 42: For "1956" read "1959".

Page 169.—Lines 5-6: Delete "There is" to end of sentence. Line 24: For "four" read "five".

Page 170.—Line 33: For "6 feet (1^m8)" read "4 feet (1^m2)".

Line 40: For "6 feet (1m8)" read "3 feet (0m9)".

Lines 48-49: *Delete* and *substitute*:—"exhibited, at an elevation of 12 feet (3^m7), from a steel tower, situated on shore close southward of Mitchell Bay.; the rear light is exhibited, at an elevation of 32 feet (9^m8), from a mast with a white, diamond-shaped daymark, 1,100 feet (335^m3), 106° from the front light".

Page 171.—Lines 2-3: Delete.

Line 9: For "6 feet (1m8)" read "4 feet (1m2)".

Line 29: For "Grosse Pointe Village" read "Grosse Pointe".

Line 35: For "7 feet (2m1)" read "8 feet (2m4)".

Page 172.—Lines 13-14: Delete "the improved channel of Lake St. Clair via".

Lines 16-17: Delete "in the downbound and 21 feet (6^m4) in the upbound channel".

Lines 28-29: Delete "56-year" to "177,700" and substitute:—"58-year period, 1900-1957, has averaged 177,500".

Page 173.—Lines 40-42: Delete.

After line 42 add:—"Southeast Bend Cut-off.—A channel, 700 feet (213^m4) wide, leads in an 064° direction for 5¼ miles from close southward of Light No. 2 in St. Clair Flats Canal to the South Channel of the St. Clair River, abreast Light No. 25. Construction of the channel to a depth of 27 feet (8^m2) is scheduled for completion by mid-1962".

Page 174.—Line 37: For "white lamphouse on a post" read "white house on a pier".

Page 175.—Line 11: Delete "interrupted".

Lines 17-21: Delete and substitute:—"Wharf.—Light.—On the western side of Walpole Island is a wharf, 157 feet (47^m9) long, with a ferry wharf and ramp on the south side. A Customs office is situated at the head of the wharf and a T-shaped private wharf, about 150 feet (45^m7) southward. The wharves are sheltered by a detached breakwater, 200 feet (61^m0) in length, lying close northwestward and a concrete breakwater, 324 feet (98^m8) long, which extends from shore close southward. The harbour thus formed, is known as Shawnee Harbour.

A light is exhibited, at an elevation of 12 feet (3^m7), from a steel tower, situated on the west end of the detached breakwater".

Page 176.—Lines 25-26: For "18 feet $(5^{m}5)$ " read "17 feet $(5^{m}2)$ ".

Line 38: For "6 feet (1m8)" read "4 feet (1m2)".

Page 177.—Line 9: For "18 feet (5m5)" read "15 feet (4m6)".

Page 178.—Line 5: For "20 feet (6^m1)" read "19 feet (5^m8)".

After line 25 add:—"A marina is situated on the wharf immediately southward of the ferry wharf."

Page 180.—Line 40: After "black light-buoy" insert:—"fitted with a radar reflector".

Line 48: Delete and substitute:—"the ferry wharf on the west side of Stag Island".

Page 181.—After line 24 insert:—"Light-buoy.—A red light-buoy, showing a flashing red light, is moored northeastward of the upper end of Stag Island, and marks the outer end of a water intake pipe at the Dupont plant, half a mile southward of Talford Creek".

Line 40: After "can buoy" add:—"fitted with a radar reflector".

Line 42: Delete "conical" to end of line and substitute:—"light-buoy, fitted with a radar reflector and showing a flashing red light, moored one mile upstream".

Line 43: Delete "and another" to end of sentence and substitute:
—"and a red light-buoy, showing a flashing red light, moored 4 cables northeastward of Stag Island Middle light".

Line 48: Add:—"A red can buoy, fitted with a radar reflector, is moored close off the Canadian shore under the transmission lines".

Page 182.—Lines 6-7: Delete and substitute:—"The Blue Water high-level highway bridge spans the river to Port Huron and a railway tunnel leads under the river one mile below the Black River entrance".

Line 9: For "20 to 30 feet $(6^{m}1$ to $9^{m}1)$ " read "19 to 30 feet $(5^{m}8$ to $9^{m}1)$ ".

Line 10: For "Ferry Dock" read "Canadian National depot".

Line 13: For "Dominion Salt Company" read "Sifto Salt Company".

Line 14: For "20 feet (6^m1)" read "18 feet (5^m5)".

Line 17: For "Ferry Dock" read "disused ferry dock".

Line 22: For "Dominion Salt" read "Sifto Salt".

Line 24: For "two warehouses" read "four warehouses".

Line 25: Delete "23 feet" to end of sentence and substitute:—"21 feet (6^m4)".

Line 29: Delete "been dredged" to end of sentence and substitute:
—"a controlled depth of 20 feet (6^m1)".

Lines 35-36: Delete and substitute:—"The L-shaped wharf formerly used by the Sarnia Yacht Club, situated 900 feet (274^m3) southeastward of Bay Point light, is ruined, with above and below water piles off the outer end of the wharf. A marina, having a small wharf with about 3 feet (0^m9) of water alongside, lies close northward of the ruined wharf.

Mac Craft Industries, a marina at which engine and hull repairs may be undertaken, is situated at the east end of the elevator slip. Alongside the wharf, 250 feet (76^m2) in length, is a depth of 18 feet (5^m5); adjoining the wharf southward is a marine railway which can accommodate boats up to 110 feet (33^m5) in length. There is a 5-ton derrick on the wharf and gasoline, diesel oil, power and water are available.

Southward of the marine railway slip is a small boat slip".

After line 46 add:—"Light.—A light is exhibited, at an elevation of 25 feet (7^m6), from a white column situated on the north entrance point to Black River".

Page 183.—Line 44: For "A red spar buoy is moored off the northwestern edge" read "Red spar buoys are moored off the northwest and southwest edges".

Page 184.—Line 18: For "white square tower" read "circular tower".

Line 22: After "in line" insert:—"bearing $180\frac{1}{2}$ ".

After line 23 insert:—"A boat basin, the entrance of which is protected by an irregular-shaped breakwater extending from the east entrance point, lies 2 cables east-northeastward from Point Edward front leading light. The Sarnia Yacht Club is situated on the south shore of the boat basin, the entrance channel to which is buoyed and reported to be dredged to 10 feet (3^m0), in 1961".

After line 33 add:—"Caution.—Dredging is in progress in the approaches to the St. Clair River, and aids to navigation may be moved temporarily from their charted positions, to mark the working area. Notices to Mariners should be consulted for the latest conditions".